

5 Bones of Contention? The Tendaguru Expedition

5.1 ‘Dinomania’ and Palaeontological Excavations Around 1900

At the end of the first rainy season [. . .] we could [. . .] admire Halley’s Comet [. . .]. The impression on the population was not great. We had been preparing the more sensible among our people for half a year [. . .]. With wise caution the Gouvernement had also announced the coming event everywhere and reassuringly pointed out that no famine or lack of clothes would result. Such familiarity with the mysterious can only serve to enhance the reputation of the Gouvernement, and forethought is better than hindsight.[. . .] When I asked one of our overseers whether people in his home village [. . .] would have been afraid [. . .], he gave me this delicious answer: ‘No, it was forbidden (!), and we had not even known before the government decree that people had to be afraid of it.’

Edwin Hennig. *Am Tendaguru*. Stuttgart: 1912.¹

Halley’s Comet is probably one of the most spectacular celestial phenomena that can be clearly and remarkably seen by the naked eye. Travelling in its orbit, it comes close to the planet Earth every seventy-five to seventy-six years, and it has been observed and studied by humankind since antiquity. During the heyday of European colonialism, it appeared in the sky between 10 April 1910 and 20 April 1910 even more amazingly than usual as it came closer to Earth than in many previous cycles. This time, Earth would even pass through the tail of the comet, and this evoked widespread hysteria amongst the colonising societies of Europe. This hysteria was characterised by apocalyptic prophecies, claiming – among other disaster scenarios – that the gases of the comet’s tail would poison all living creatures on Earth. Despite some sensible reassurances that no life was in danger, ‘doomsday’ scientists and one of the first popular mass media hypes fuelled a widespread feeling of fear at *the fin du siècle*. Among other strategies, people panic-bought the latest military equipment such as gas masks to protect themselves from the allegedly harmful gases of the comet’s tail. In the end, nothing happened to humanity despite all the hysteria and massive media coverage, especially in the rapidly industrialising European and North American mass media societies.²

¹ Hennig. *Am Tendaguru*, pp. 96–97.

² Cf. Fried, Johannes. *Dies Irae. Eine Geschichte des Weltuntergangs*. Munich: 2016, pp. 199–202. Cf. Froböse, Rolf. *Der Halleysche Komet*. Thun: 1985, pp. 1–46. Cf. Harpur, Brian. *Halleys Komet. Das offizielle Buch der ‘Halley’s Comet Society’*. Frankfurt o.M.: 1985, pp. 47–90, 141–164.

At the palaeontological excavations at the Tendaguru Mountain in German East Africa, the panic related to Halley's Comet was somewhat absurd. Under the supervision of the two German palaeontologists, Edwin Hennig and Werner Janensch, up to 800 East Africans exposed the most spectacular dinosaur fossils known to humankind so far. Relatedly, according to the most plausible theory, it was indeed a comet's impact on the Earth that had led to the dinosaurs' extinction millions of years before the beginnings of German colonialism in East Africa. In this sense, a phenomenon similar to Halley's Comet – though with the big difference that it actually killed living beings on planet Earth – had indeed been the most decisive precondition that enabled something like the Tendaguru Expedition to happen in the first place. Yet, there was more to fear from humankind itself than from the toxic gases in the tail of Halley's Comet: in a matter of only a few years, soldiers in WWI would be required to wear respiratory masks to protect themselves from the recently developed weapons of chemical warfare.

The Tendaguru palaeontological expedition, organised and carried out by the forerunner of today's Museum for Natural History in Berlin between 1907 and 1913, would soon prove to become the largest and most successful dinosaur excavations so far known in human history. Indeed, the sheer scale of the find is not the only reason why the expedition is a historical phenomenon worth studying. For our purposes, it is rather the Tendaguru Expedition's embeddedness in the history of the 'colonial globality' taking place around 1900 that makes it a fascinating field of research, particularly as far as the global history of labour is concerned. As illustrated by Edwin Hennig's comments above, taken from his report on the Tendaguru Expedition published in 1912, the return of Halley's Comet entailed not only massive media coverage in Europe but was also a matter of anticipation and debate in the colonies of various European powers.³ As revealed by Hennig's statement, some concern about Halley's Comet also found their way to the German colonial administration in East Africa. Consequently, the *Gouvernement* issued several announcements assuring the local population that the comet was no omen for anything, and urged people to keep the colony at peace. It was feared that the local population would take the comet as a kind of heavenly signal to rebel against German colonial rule once again. To prevent any anti-colonial warfare, the colonial administration, therefore, never got tired of repeating that Halley's Comet was an ordinary occurrence and tried to use the appearance of the comet for its own benefits accordingly. By demonstrating the ability to fore-

³ There are some files suggesting that the appearance of Halley's Comet in 1910 may have contributed to the Chinese Xinhai Revolution, ending the over 2,000-year-old Chinese Empire cf. Hutson, James. *Chinese Life in the Tibetan Foothills*. Shanghai: 1921, p. 207.

cast such a celestial event, the colonial administration hoped to boost its own prestige among the East African population as a kind of powerful fortune teller and, thereby, reinforce German colonial rule.⁴ Yet, this strategy of the *Gouvernement* seems to not have had the intended effect: By stating that his fellow villagers ‘would not have even known that there was any reason to fear’ any celestial object, Hennig’s East African overseer challenged the alleged soberness of European civilisation, whose societies had indeed – and in contrast to the East African people – experienced widespread hysteria because of the advent of Halley’s Comet in the skies above Europe. Moreover, the provocative statement of the overseer challenged German colonial rule openly by ridiculing excessive colonial laws that would allegedly even forbid unavoidable human feelings such as fear. This shows not only the self-confidence of one of Hennig’s leading employees, but also points to the overall significance of the East African workforce for the Tendaguru Expedition. Furthermore, in the attempts to reassure the East African population by explaining the normality of Halley’s Comet, the German colonial administration revealed its prevailing alert towards potential anti-colonial wars in German East Africa. As the last skirmishes of the Maji Maji War had just faded in 1908, only one year before the beginnings of the Tendaguru Expedition in April 1909, it is not surprising that the colonial administration appears to have been nervous indeed. Even more so, as the palaeontological excavations took place in the *Lindi* district, which had been severely affected by warfare. The population of the *Lindi* district experienced widespread famine because of the war, and the local population was primarily the potential workforce available for the Tendaguru Expedition: these two post-war circumstances were decisive in the background as far as the labour supply for the palaeontological excavations was concerned.

Finally, the widespread hysteria about Halley’s Comet took off in Europe thanks to the emerging mass media in European and American societies. Likewise, German mass media helped popularise Edwin Hennig’s report about the discovery of dinosaur fossils in East Africa – *Am Tendaguru*, published in 1912 right after his return to Germany. A valuable historical source, the report’s popularity reflects the fact that sciences like palaeontology were deeply embedded in popular culture and could reach a wide public indeed. Furthermore, the publicity about Tendaguru

4 Documents intending to inform the colonial population in Swahili cf. “Nyota wa Mkia”. *Kiongozi. Habari kwa Watu Wote Wa Deutsch-Ostafrika*, no. 58. Tanga: March 1910. Cf. Geheimes Staatsarchiv Stiftung Preußischer Kulturbesitz (GehStArch). GehStArch. VI. HA. Nachlass Heinrich Schnee no. 72. Bekanntmachungen und Verordnungen in Suaheli und lateinischer Umschrift. Bezirksämter Wilhelmstahl, Bagamoyo, Tanga, Lindi 1906–1912. “Elani no. 17, Lindi 10th February 1910”. Cf. “Ver-mischte Nachrichten. Der Stammbaum des Kometen”. *DOAZ*, XII, no. 20. Daressalam: 12 March 1910. Cf. “Unser Wissen von den Kometenschweifen”. *DOAZ*, XII, no. 17. Daressalam: 02 March 1910.

helped to popularise German colonialism among the masses, which encouraged funding urgently needed for scientific endeavours.⁵ For example, a letter of March 1911 from Carl Hagenbeck (a German zoological entrepreneur) to Prof. Dr Wilhelm Branca – director of Berlin's Geological and Palaeontological Institute and of Berlin University's Museum – about funding the third tranche of the Tendaguru Expedition is telling:

After all, these excavations are a major national undertaking. We Germans must in no way be inferior to the Americans. But these people are very lucky that their rich people [. . .] are contributing financially to these excavations. [. . .] [S]ince I am a well-known personality among the rich of Germany, I will [. . .] write directly to many different people, [. . .] in order to raise the funds, [. . .] we [. . .] need. My only wish with this undertaking [. . .] is that you will allow me [. . .] to have [. . .] plaster models made [. . .] by my artist [. . .] of complete skeletons. As you probably know, I have exhibited [. . .] a large number of prehistoric animals of the American fauna here in my zoo.⁶

The historian, Ilja Nieuwland, describes the intense interest in palaeontology in European and American societies during the heyday of western imperialism as 'dinomania'. Especially in the urban centres of industrialised societies, the beginnings of consumerism and free-time leisure activities had been growing since the 1850s. First in Britain, later also in the other European countries and America, free-time activities had become not only part of middle-class culture, but also part of working-class culture. Integral to these free-time activities were the phenomena of popular culture such as zoos or the so-called ethnological exhibitions (*Völkerschauen*) that attempted to display animals and peoples from all parts of the world in the major cities of Europe and America. Particularly, the *Völkerschauen* conveyed the fiction of allegedly 'primitive' peoples, whose only reason for existence seemed to be colonisation by western countries and, in this way, they supported and legitimised colonial conquest. Yet, those *Völkerschauen* were far from the realities of the people displayed. Instead, the ethnological exhibitions merely served and strengthened western expectations and discourses about white racial supremacy and global domination. The German Carl Hagenbeck, born in Hamburg, was one of the businessmen who most successfully exploited the desires of the recently emerged consumer societies to reaffirm the alleged superiority of their civilisations. Indeed, Hagenbeck became a rich man by gathering wild animals all over the world and

5 Cf. Hennig. *Am Tendaguru*. For the historical context and genesis of travel writing from the late eighteenth to the late nineteenth and early twentieth centuries cf. Schröder. *Das Wissen*, pp. 113–198. Cf. Keighren, Innes M. et al. *Travels into Print. Exploration, Writing, and Publishing with John Murray, 1773–1859*. Chicago and London: 2015, pp. 1–33, 209–226.

6 Museum für Naturkunde (MfN). *Historische Bild und Schriftgutsammlungen* (HBSB). Tendaguru Expedition 7.3. Finanzierung, p. 101.

selling his trophies to various zoos, where they would be displayed as singular attractions or as additions to exhibitions of allegedly ‘uncivilised’ human beings.⁷ It seems surprising only at the first glance that a man like Carl Hagenbeck, who catered to the demands of the masses with his (human) zoos, contacted a man of science like the university professor, Wilhelm Branca. In fact, the line between the perpetrators of ‘dinomania’ and men of science was very thin indeed. Especially in the first decades of the discipline, palaeontology and the public circus-like display of the ‘terrible reptiles’ could hardly be distinguished from each other. Moreover,

[a]n important element in the early portrayal of dinosaurs had always been their size – and frequently little else. From the early days after their discovery, they represented brute, dumb force and were in a way representative of the uncontrollable forces of nature – not entirely different from the way in which the savage wildlife of Africa or many unknown peoples were perceived.⁸

Only from the 1890s onwards did palaeontology emerge as a serious, comparatively well-defined scientific discipline that borrowed significantly from subjects such as geology, geography and biology. Hence, not only the roots of their disciplines had a common background but Branca’s profession and Hagenbeck’s business also overlapped in some significant ways in the year 1911: both, (human) zoos and public institutions like museums had recently developed out of the masses’ demand for leisure activities. The widespread ‘dinomania’ of European and American societies at the *fin du siècle* was indeed an integral part of the emerging consumer and free-time societies that also included educational institutions like museums. In addition, the *zeitgeist* was obsessed and fascinated by hugeness, which mingled smoothly with the concepts of imperialism and colonialism. Large size was equated with modernity, progress and importance. As any western nation wanted to be regarded as the most powerful, all colonial powers were in competition regarding prestige objects and achievements like having the largest navy, the most impressive architecture, the largest exhibition and weapons of the greatest firepower. Size mattered indeed and dinosaurs were, there-

7 Cf. Rieppel. *Assembling*, pp. 1–13. Cf. Nieuwland. *American Dinosaur*, pp. 21–48. Cf. Mohr, Erna. ‘Hagenbeck, Carl’. *Neue Deutsche Biographie*, 7, 1966, pp. 487–488. Web. <https://www.deutsche-biographie.de/pnd118700502.html#ndbcontent> (26 February 2020). Cf. Hagenbeck, Carl. *Von Tieren und Menschen*. Web. *Zeno.org*. <http://www.zeno.org/Naturwissenschaften/M/Hagenbeck,+Carl/Von+Tieren+und+Menschen> (26 February 2020), Chapters 2, 3, and 5. Cf. Dittrich, Carl and Rieke-Müller, Annelore. *Carl Hagenbeck (1844–1913): Tierhandel und Schaustellungen im Deutschen Kaiserreich*. Berlin et al.: 1998, pp. 13–143, 144–172, 234–260. Cf. Thode-Arora, Hilke. ‘Hagenbeck: Tierpark und Völkerschau’. *Kein Platz an der Sonne. Erinnerungsorte deutscher Kolonialgeschichte*. 244–256. Ed. Jürgen Zimmerer. Bonn: 2013, pp. 244–255.

8 Nieuwland. *American Dinosaur*, p. 33.

fore, the perfect display item for the period preceding WWI to represent the power of proud colonial empires like the German *Reich*. Thus, the Tendaguru Expedition to German East Africa was not only a matter of German national interest but also a matter of prestige for German science.⁹

Size therefore translated well into cultural and economic capital for Berlin's natural museum and the Tendaguru Expedition. Before the fossils were discovered in German East Africa, the bones of the *dipolodocus carnegii* – named after the US industrialist Andrew Carnegie, (one of those 'rich people' that Hagenbeck referenced) who financed dinosaur excavation in America – were known as the largest in the world. With the Tendaguru bones proving to be even bigger than the American fossils, Berlin's Museum of Natural History experienced a sharp rise in its scientific reputation, its number of visitors and its financial means. Large lower leg and upper arm dinosaur fossils were deliberately chosen for display in Berlin after their discovery in German East Africa, to boost the Tendaguru Expedition both materially and immaterially. Remarkably, displaying the largest bones found during the initial excavations even provided enough money to finance the third and last German expedition to the Tendaguru after 1911. In turn, with the Germans now in possession of the largest dinosaur fossils in the world, the *Reich* had surpassed not only Britain, France and Belgium, but also the USA in the competition for the largest fossils in the world.¹⁰

9 Cf. Nieuwland. *American Dinosaur*, pp. 3–48. Cf. Rieppel. *Assembling*, pp. 1–42. Cf. Schweighöfer. *Vom Neandertal*, pp. 7–20, 369–378. For the German Tendaguru Expedition cf. Maier. *African Dinosaurs*, pp. 13–22. Cf. Mogge, Winfried. "Im deutschen Boden Afrikas". Wilhelm Branca, die Tendaguru-Expedition und die Kolonialpolitik'. *Deutsch-Ostafrika. Dynamiken Europäischer Kulturkontakte und Erfahrungshorizonte im kolonialen Raum*. 125–144. Eds. Stefan Noack et al.: Berlin et al.: 2019, pp. 133–139, 142–144. Cf. Kretschmann, Carsten. 'Noch ein Nationaldenkmal? Die Deutsche Tendaguru Expedition 1909–1913'. *Inszenierte Wissenschaft. Zur Popularisierung von Wissen im 19. Jahrhundert*. 191–212. Ed. Stefanie Samida. Bielefeld: 2011. Cf. Vennen, Mareike. 'Auf Dinosaurierjagd. Wissenschaft, Museum und Unterhaltungsindustrie'. *Dinosaurier Fragmente. Zur Geschichte der Tendaguru-Expedition und ihrer Objekte 1906–2008*. 208–231. Eds. Ina Heumann et al. Göttingen: 2018, pp. 218–222. For a general introduction to Empires, the media and the popularisation and globalisation of knowledge and science cf. Przyrembel, Alexandra. 'Empire, Medien und die Globalisierung von Wissen im 19. Jahrhundert. Einführung'. *Von Käufern, Märkten und Menschen. Kolonialismus und Wissen in der Moderne*. 197–220. Eds. Rebekka Habermas and Alexandra Przyrembel. Göttingen: 2013. For (free-time) consumerism particularly among the working classes in the German speaking countries cf. Bänziger. *Die Moderne als Erlebnis*, pp. 201–326.

10 Cf. Vennen, Mareike. 'Wer hat den Größten? Zur Verwertung und Verteilung der ersten Tendaguru-Exponate'. *Dinosaurier Fragmente. Zur Geschichte der Tendaguru-Expedition und ihrer Objekte. 1906–2018*. 136–165. Eds. Ina Heumann et al. Göttingen: 2018. Cf. Hennig. *Gewesene Welten*, pp. 20–22.

Funding has always been decisive for any field of science. Searching for financial means for the Tendaguru Expedition, Hagenbeck's proposal to contact his rich German acquaintances to donate to the palaeontological excavations illustrates this fact. In contrast to many of the American excavations at the Tendaguru, there was neither any single German tycoon, like Andrew Carnegie, who would sponsor the entire excavation by himself, nor any German governmental institution that agreed to wholly finance the expedition. Given the patchwork character of the nineteenth-century German funding institutions, mixed financing was the only way. Ultimately, there were many people and institutions donating to the prestigious German scientific endeavour. Yet, despite this insecure financial situation, the initiators of the funding campaign explicitly refrained from asking the average citizen for donations. In line with the tradition of the *Gesellschaft Naturforschender Freunde zu Berlin* (Berlin Society for Friends of Natural Science), the two members of this association and initiators of the Tendaguru funding committee – Branca and the pathologist David Paul von Hansemann – intentionally approached only an exclusive circle of people consisting of representatives of German politics, business, science, the higher nobility and colonial dignitaries, relying solely on them to join the funding committee. Despite the widespread 'dinomania' of the masses, the leading figures agreed that the gigantic bones should remain a matter of prestige for not only the entire nation and Berlin's science circles, but also for their German society. Hence, all the donors of the Tendaguru Expedition shared a similar background: they were almost exclusively male, loyal to the *Kaiser*, German nationals, aristocratic and very wealthy or members of the academic elite. Moreover, Branca and Hansemann succeeded in convincing Johann Albrecht zu Mecklenburg¹¹ to become the representative patron of the Tendaguru funding committee, further stressing the prestigious character of the palaeontological excavations by crowning the endeavour with a vibrant and well-known personality in colonial and public circles. The Duke zu Mecklenburg had already supported many colonial endeavours both financially and idealistically, and as the long-standing chairman of the *Deutsche Kolonialgesellschaft* (1885–1920), he was predestined to act as the honorary president of the Tendaguru funding committee.¹² To win the hearts of the remaining German na-

11 Cf. Diebold, Jan. *Hochadel und Kolonialismus im 20. Jahrhundert. Die imperiale Biographie des 'Afrika Herzogs' Adolf Friedrich zu Mecklenburg*. Vienna et al.: 2019, pp. 79–130.

12 For the historical background of this founding tradition, especially concerning the members of British, French and German scientific associations cf. Schröder. *Das Wissen*, pp. 35–68. For the history of the *Gesellschaft Naturforschender Freunde* cf. Heesen, Anke te. 'Vom naturgeschichtlichen Investor zum Staatsdienst. Sammler und Sammlungen der Gesellschaft Naturforschender Freunde zu Berlin um 1800'. *Sammeln als Wissen. Das Sammeln und seine wissenschaftliche Be-*

tionalistic upper-class target group, the committee further showed anticipatory obedience towards anti-Semitic resentments and strategically avoided attracting the support of German Jews who lived their religion publicly. At the same time, the funding committee still received funds from German Jews who were willing to support the excavation at the Tendaguru. In particular, they accepted donations from German Jews who were rather distanced from their backgrounds, like Colonial State Secretary Bernhard Dernburg,¹³ who could thus appear as a benefactor publicly.¹⁴

The lion's share of the complete funding sum of 231,607.45 marks was collected in the initial years between 1909 and 1911, when 183,607.45 marks were donated. One-sixth of the complete sum was derived from scientific societies like the *Gesellschaft Naturforschender Freunde zu Berlin*, founded as early as 1773¹⁵ – where Branca was an influential member – or foundations that sponsored scientific projects like the *Alexander von Humboldt Stiftung für Naturforschung und Reisen* (Alexander von Humboldt Foundation). Given their societal and economic power in the *Reich*, it is especially surprising that companies in the German heavy industries were rather reserved towards the Tendaguru project and many refrained from donations. Other companies like the *Deutsch-Ostafrika-Linie* (DOAL) or *Maggi* supported the expedition indirectly. The DOAL granted a discount on their transport rates for all dinosaur fossils transported from East Africa to Germany, while *Maggi* equipped the Tendaguru Expedition with preserved foods throughout the entire excavation works. Among these few German industrial tycoons, only the family members of economic heavyweights such as *Krupp*, *Siemens* and *Röchling* were ready to donate significant sums. Indeed, the largest share of the final sum was donated by wealthy upper-class people loyal to the *Kaiser* and the German *Reich*: in addition to these donors, there were banking families, publishers in Leipzig, government officials, doctors in Berlin, members of the nobility, merchants and wealthy private

deutung. 62–84. Eds. Anke te Heesen and E.C. Spary. Göttingen: 2002. Exemplary for the funding of scientific expeditions during the *Kaiserreich* cf. Steinecke. 'Die Ausgrabung von Babylon', pp. 285–296. For a general overview cf. Vogel, Jakob. 'Public-private partnership. Das koloniale Wissen und seine Ressourcen im langen 19. Jahrhundert. Einführung'. *Von Käfern, Märkten und Menschen. Kolonialismus und Wissen in der Moderne*. 261–284. Eds. Rebekka Habermas and Alexandra Przyrembel. Göttingen: 2013.

¹³ Cf. Schiefel. *Bernhard Dernburg*, pp. 11–16. For a Jewish perspective on Dernburg cf. Bartmuss, Hartmut. *Bernhard Dernburg. Kolonialpolitiker der Kaiserzeit*. Berlin: 2014.

¹⁴ Cf. Stoecker, Holger. 'Über Spenden und Sponsoren. Zur Finanzierung der "Deutschen Tendaguru Expedition"'. *Dinosaurier Fragmente. Zur Geschichte der Tendaguru-Expedition und ihrer Objekte. 1906–2018*. 79–93. Eds. Ina Heumann et al. Göttingen: 2018. Cf. Mogge. *Wilhelm Branco*, pp. 133–162, 199–222, 271–294.

¹⁵ Cf. Schröder. *Das Wissen*, p.36.

scholars or professors. Given the significance of the *Deutsche Bank* (probably for both the *Otto* Plantation in Kilossa and) for the construction of the *Central Railway*, it deserves to be stressed that Arthur von Gwinner, director of the *Deutsche Bank*, was one of the major donors to the Tendaguru Expedition. Moreover, Gwinner not only supported the palaeontologists by private donations, but he also used his position as head of the leading German bank for the same purpose, as he established and managed the bank account administrating the Tendaguru donations.¹⁶

Like Hagenbeck, Gwinner promised Branca and Hansemann to advertise for donations to the Tendaguru Expedition among his rich friends and acquaintances. And like Branca and Hansemann, Gwinner was aware of the necessity to act strategically to make funding a success:

If it is your wish to concentrate the funds at Deutsche Bank, you only need [. . .], expediently through me, to open an account at our Deposit Office. The account could be opened in your name with the addition "Tendaguru-Account" and you would then be entitled [. . .] to collect the necessary contributions from the account. [. . .] The bank would not charge a commission. But I repeat, it seems to me to be more convenient if you wait at least another month and then ask for the transfer [. . .] by a printed [. . .] circular of the secretary. After all, there could be this or that person, especially among those who, from experience, are most likely to donate for public purposes, who is so petty as to want to give nothing or less when the money is being collected at Deutsche Bank. If you prefer to collect the money elsewhere, the Deutsche Bank will of course resign. My intention is solely to serve the cause and not to make a small advertisement for the Deutsche Bank, which can do without one.¹⁷

The director of one of the most significant German banks was therefore not only financing German colonial endeavours that would promise lucrative profits like the *Central Railway* or the *Otto* Company. Gwinner also generally supported colonial projects, ideally if they promised to boost the (scientific) prestige of the German *Reich*. As the *Deutsche Bank* was on good terms with the railway constructing companies in German East Africa, it also thought to share valuable experiences gained at the railway with the Tendaguru Expedition. Preparing for the fossil excavations, the men in charge wondered how the petrified bones could be transported best from the Tendaguru Mountain to the coast. One idea was to use motor vehicles or rather, early lorries. *Holzmann* had tried to use this new technology for the transportation of railway building materials, and Gwinner recommended that Branca contact *Holzmann's* headquarters in Dar es Salaam to enquire about the issue and to purchase a lorry for the transport of the palaeontological materials.¹⁸

¹⁶ Cf. Stoecker. 'Über Spenden und Sponsoren'. Cf. Mogge. *Wilhelm Branco*, pp. 133–162, 199–222. 271–294.

¹⁷ MfN. HBSB. 7.3, pp. 28–29.

¹⁸ Cf. MfN. HBSB. Tendaguru Expedition 1.3. Vorbereitungen, pp. 36–37.

Yet, as the early lorries built by Mercedes-Benz (so-called *Gaggenau Wagen*) had not been able to withstand the exposure to the East African traffic conditions, Branca's idea to use lorries for transportation would not become a reality.¹⁹ Instead, the Tendaguru Expedition had to rely on human portage and African labour. Both remained decisive for the palaeontological endeavour from the very beginning to the end. From the start of the excavations in 1909 until their end in 1913, the few Europeans at the Tendaguru would rely significantly not only on manual African labour, but also on East African expertise related to all kinds of excavation works.

5.2 Discovering Bones in the War-Ridden Area of *Lindi*

Since my birth I have never seen such scarcity. I have seen famine but not one causing people to die. But in this famine, many are dying, some are unable to do any work at all, they have no strength, their food consists of insects from the woods which they dig up and cook and eat. [. . .] Many have died through eating these things from the woods and wild fruits.

Agnes Sapuli to Rev. C.C. Child, from Mwititi, 28 February 1907²⁰

Recent research has shown that the reasons, course, and outcome of the Maji Maji War against German colonial rule were not uniform. Although the people of the southern half of the colony were united in their case for overthrowing German rule, the immediate causes that led to ultimately deciding to take up arms against the colonisers varied from region to region.²¹ In any case, the overall consequences for the areas affected by the war were devastating: up to one-third of the entire (civil) population died – not because of warfare as such, but predominantly because the German military pursued a 'scorched earth' strategy to defeat the African forces after they had taken up guerrilla tactics.²² The German troops either confiscated foodstuffs and used them for themselves, or burnt down African provisions as well as crop-producing fields and countless villages. Governor Götzen stated in his official report of 1909:

As in all wars against uncivilized peoples [. . .], in the present case, too, the planned destruction of the hostile population's property and possessions was indispensable. The destruction

19 Cf. Stadtarchiv Frankfurt. W1/2 – 278/1. *Rehfeldt*, pp. 2–3. Cf. TNA. G 17/63, "VII E. I No. 534, 27. Febr. 1909".

20 Agnes Sapuli To Rev. C.C. Child, from Mwititi, 28.02.1907, UMCA A/5. Qutd. in: Iliffe and Gwassa. *Records of the Maji Maji Rising*, p. 27. Also qutd. in: Seeberg, Martin. *Der Maji Maji Krieg gegen die deutsche Kolonialherrschaft*. Berlin: 1989, p. 81. Cf. Rösser. *Forced Labour*, p. 34.

21 Cf. Giblin and Monson (Eds.) *Maji Maji. Lifting the Fog of War*.

22 Cf. Wimmelbucker. 'Verbrannte Erde'.

of economic values, such as the burning of villages and food stocks, may seem barbaric to those far away. On the other hand, if you consider [. . .] [that] such an action was the only way to force the opponent into submission, then one will arrive at a milder understanding of this 'dira necessitas'.²³

The outcome was widespread famine, as described by Agnes Sapuli in 1907. This famine killed the majority of the overall war victims. Even worse, after the last skirmishes had come to an end by 1908, the rainy season in the year to follow failed and kept the provision of foodstuffs at a minimum, at best. The populations resident and, therefore, also most affected in the southeastern district of *Lindi* were the Wayao, the Wamuera, the Wamakua and the Wangoni, who maintained complex interactions, rivalries and interdependencies with each other. In the district of *Lindi*, especially the cultures of the Wamakua and Wamuera societies were overwhelmingly organised in a decentralised manner. Without any paramount chief, they had no central authority and each of their small villages was generally organised on its own account. This societal structure provided the inhabitants with a high degree of flexibility and enabled them to escape the designs of the German colonial administration repeatedly. They hid in the bush or moved to less-accessible areas and managed to remain comparatively untouched by German colonial rule before the war. Yet, despite this relative isolation, the people of the *Lindi* district also had several direct experiences with representatives of the German colonial administration or German companies. Just like in other areas of German East Africa, colonial humiliation and abuse was not welcomed in the *Lindi* district. As a result, the population of the southeastern district took up arms against colonial taxation and corporal punishments, as well as forced and/or low-paid labour and portage ordered by the colonial authorities or German planters up to 1905. As most of the Germans living in the district resided along the coast, north and south of the district's capital of *Lindi*, the Maji Maji War started not at the coast where colonial power was concentrated. Instead, it started in the district's hinterland. In the course of the war, as in other parts of the colony, the German military put down the African resistances brutally and the *Lindi* district faced severe famine after the war from 1907 onwards. Another consequence was also a severe loss of its population.²⁴ When visiting the neighbouring district of

²³ Götzen. *Deutsch-Ostafrika*, pp. 247–248. Also qutd. in: Seeberg. *Der Maji Maji Krieg*, p. 80.

²⁴ Cf. Libaba, P.M. 'The Maji Maji Rising in the Lindi District'. Maji Maji Research Project no. 7/68/2/1. Gwassa, G.C.K. and Iliffe, John (Eds.). *Records of the Maji Maji Rising*. Dar es Salaam: 1968, pp. 1–12. Cf. Aas. *Koloniale Entwicklung*, pp. 28–63, 88–97.

Kilwa in summer 1913, Fritz Otto of the *Otto* plantation still “saw many traces of the uprising of 1905”²⁵ and the consequences for the entire southern half of the colony were severe for many years to come.²⁶

For the German cotton, rubber and sisal plantations and other companies in the district, the war turned out to be a disaster. As many plantations were destroyed in the war, they had to be restarted from scratch. Moreover, the death of so many people living in the war-ridden area entailed the loss of potential workers for German plantations or other colonial enterprises. When Eberhard Fraas, the famous palaeontologist from Stuttgart, inspected the fossils in 1907, he too reported on the war’s fatal consequences around the major fossil discovery locations. Before coming to the Tendaguru, Fraas had been in the north of the colony, near *Nyanza* (‘Lake Victoria’), as a geological advisor for the German textile entrepreneur Heinrich Otto, who sought to establish a cotton plantation there (cf. Chapter 4). After the German engineer Bernhard Sattler had sent a report about the fossil discovery locations to the *Reich*, Fraas travelled from one of the most northern districts of German East Africa to the southern districts to confirm the palaeontological sensation with his well-trained eye.²⁷

Remarkably, the actual reason why Sattler had come to the Tendaguru Mountain was also rooted in the consequences of the Maji Maji War. As already mentioned, the war included the destruction of several German colonial businesses in East Africa, and one of the suffering German enterprises was the *Lindi Schürfgesellschaft* (Lindi Mining Company), which had employed Bernhard Wilhelm Sattler. Sattler was not only the company’s most important figure on the ground, but he also played a significant part in the beginnings of the Tendaguru Expedition. After the war, Sattler’s business and his *Lindi Schürfgesellschaft* was nevertheless close to bankruptcy because of severe war damage. The only way to save the *Lindi Schürfgesellschaft* appeared to be expanding the company’s field of activities. Sattler thus decided to expand the enterprise’s catchment area and search for raw materials such as mica in Lindi’s hinterland, ca. 100 km away from the former headquarters of the mining company. When searching for minerals, one of his African employees directed his attention to something very different from any raw material: something which appeared to be a gigantic bone of some animal. This incident would go down in history as the initial discovery of the Tenda-

25 Stadtmuseum Wendlingen am Neckar, “Tagebuch Fritz Otto”, p. 29.

26 Cf. Becker, Felicitas. ‘Südost-Tansania nach dem Maji-Maji-Krieg. Unterentwicklung als Kriegsfolge?’. *Der Maji-Maji-Krieg in Deutsch-Ostafrika 1905–1907*. 184–195. Eds. Felicitas Becker and Jigal Beez. Berlin: 2005. Cf. Becker. ‘Sudden Disaster’, pp. 295–320.

27 Cf. Stoecker. ‘Maji-Maji-Krieg und Mineralien’, pp. 25–33.

guru Expedition – an incident that was intrinsically linked to the history of the Maji Maji War and its fatal social and economic consequences.²⁸

5.3 Labour and the Potential Workforce of the Tendaguru Expedition in the *Lindi* District

In addition to the measures applied against famine so far [. . .], two further measures could be considered: Calling the able-bodied starving people to work on plantations and forcibly transferring the starving population to the areas spared by the uprising. I immediately considered the first means, and since the first attempts were unsuccessful – when asked if they wanted to work, some people said that they preferred to die of hunger – I was not afraid to let the Akidas exert gentle pressure here and there. [. . .] Only as many people are called to plantation work as to not harm the tilling of the indigenous' shambas [fields].

Acting District Officer of Lindi, Mr ten Brink, to the Governor. Lindi, 8 March 1907.²⁹

German colonial labour policies, in the context of the Maji Maji War, were generally merciless. By 'the measures applied against the famine so far', Acting District Officer of *Lindi*, Mr ten Brink, meant that the colonial authorities were willing to provide foodstuffs only to those people who were willing to work for the colonial government or German enterprises such as plantations. This statement shows four things: first of all, it reveals that the local colonial authorities around District Officer ten Brink were still willing to let the population die of starvation after the German colonial military had induced the rampaging famine by applying the 'scorched earth' policies to the populations of *Lindi*. Secondly, it shows that ten Brink was still ready to force emaciated people to work, just like other colonial officials had done before him. During famines, not induced by the colonial authorities, and when the colony was officially not at war, food relief had been regarded as a handy indirect incentive to force the people to work in the 1890s and around 1900, not only by senior colonial officials, but also by missions.³⁰ Thirdly, it shows that the local population was exclusively valued as a potential workforce by people like *Lindi*'s District Officer ten Brink. In the fourth place, ten Brink's statement makes clear that even the cruellest

²⁸ Cf. Stoecker. 'Maji-Maji-Krieg und Mineralien', pp. 25–33. Cf. Tetzlaff. *Koloniale Entwicklung*, pp. 259–262. Cf. Maier. *African Dinosaurs*, pp. 8–11. Cf. UAT. 407/2,1. Nachlass Hennig (1882–1977). Brief-Tagebuch an die Familie, Teil 1, p. 82.

²⁹ TNA. G4/75. [Bestellung der Mitglieder und Sitzungsprotokolle des] Bezirksrates der Kommune Lindi, p. 18.

³⁰ Cf. Koponen. *Development*, p. 346. Cf. Bald, Detlef. *Deutsch-Ostafrika. Eine Studie über Verwaltung, Wirtschaft und Interessensgruppen*. Munich: 1970, pp. 69–70. Cf. Dernburg. *Südwestafrikanische Eindrücke*, p. 37–38.

war strategies could not break the resistance of the local populations against German colonial rule entirely, as many of them chose starving to death instead of working for the coloniser, even if the war had almost come to an end. This fact is particularly important for the analysis of labour and labour relationships at the palaeontological excavation site of the Tendaguru, which started only one year after the last skirmishes of the Maji Maji War had ended. This situation in the *Lindi* region must be regarded as the most important background for the German palaeontologists, Edwin Hennig and Werner Janensch, who would rely on up to 800 African workers for their scientific excavation between 1909 and 1911.

At the onset of the Tendaguru Expedition, the war's fatal consequences were still prevalent in the minds of the local population, who had not only endured the war itself, but continued to struggle with its aftermath. When the European party of the contemporary Tendaguru Expedition arrived at Lindi's port in early April 1909, they camped for one night outside the town, with 160 African men and women who would carry their provisions and material from the coastal district capital to the ca. eighty km distant Tendaguru Mountain. At dusk and during the night, they were joined by the ca. twenty-five European men and women who lived in Lindi, and a farewell party began. Amongst the 160 Africans, Wangoni, Wayao and Wamuera people were present, who all performed their war and "national dances"³¹ to the European and African audience. Clearly audible, also to the unaccustomed ears of the palaeontologist Edwin Hennig, who had just arrived in German East Africa for the first time and did not know any Swahili or other East African languages yet, was the war cry 'Maji Maji', which had permeated the air during the preceding years of anti-colonial warfare between 1905 and 1908. Apart from the war cry as such, the European parts of the audiences, who did not understand any African languages, also fairly understood that the dances and singing recounted the events of the past struggle and its historical importance and fatal consequences for the local populations. Although the major acts of war in the *Lindi* district had ceased by January 1906 and the area was declared as 'pacified' by the colonial military³² during the entire duration of the Tendaguru Excavation, the consequences of the Maji Maji War flared up occasionally in Hennig's diary, illustrating its enduring importance. On his very first day in Lindi, 7 May 1909, Hennig also noticed "many enchained prisoners",³³ who were probably convicts who had been detained during the Maji Maji War. Moreover, when the party left for the Tendaguru Mountain the next morning, they encountered several remnants of the war such as "the skulls of killed insurgents on

³¹ Hennig. *Am Tendaguru*, p. 16, cf. 12–19.

³² Cf. Maier. *African Dinosaurs*, p. 10.

³³ UAT. 407/80, p. 5, cf. pp. 5–7.

stakes” and an old military *boma* near the Noto-Plateau, where the caravan even camped the second night on their way to the future excavation site.³⁴ Although the last prisoners of the Maji Maji War were released by the end of 1911, on the granting of amnesty in recognition of the *Kaiser’s* birthday, the atmosphere still appeared strained in some areas, according to Hennig’s impressions. When in *Kilwa* in May 1911, Hennig noted he “would put the Kilwa district in a position to rebel at any moment” as he and his fellow fossil excavators had encountered passive but staunch resistance to any European intruder, and to his African company and their palaeontological work, near a place called Makangaga.³⁵ Given the widely noticeable consequences of the Maji Maji War, such as the remarkable population loss, the fairly recent resistance of the local populations against labour for German companies even in the face of death and the Tendaguru Expedition’s dependency on a local workforce, the question arises of how workers could be recruited for the palaeontological endeavour at all.

Although Ohl, Stoecker and Vennen had considered labour and work at the Tendaguru Expedition primarily using image sources and by investigating the work of East African overseers and preparators,³⁶ they overlooked examining the phenomenon of labour at the Tendaguru in the overall context of labour supply in the *Lindi* district. None of them therefore consulted Norbert Aas’ instructive study about the society and economy of the *Lindi* district during the German colonial period, which gives an excellent overview about the labour supply of the district by investigating the plantations in the areas surrounding the Tendaguru. Examining the similarities and differences between the labour supply at the German plantations in the *Lindi* district and that at the Tendaguru Expedition, Aas’ study provides the necessary background to answer the questions of why potential workers took up work at the Tendaguru, or why they did not. According to Aas, all European enterprises that focussed primarily on the production of cash crops such as cotton, sisal and rubber, or exceptionally, on the extraction of raw materials, were concentrated on the coast. Like the abovementioned Sattler, all of them attempted to expand to the district’s hinterland only exceptionally during the German colonial

34 MfN. HBSB. 9.2. Expeditionsdokumentation Tagebuch Janensch, p. 10. Cf. UAT. 407/2,1, pp. 99–104, 108–112. Cf. Maier. *African Dinosaurs*, pp. 9–10, 25, 38. For an analysis of East African poetry processing the Maji Maji War cf. Casco. *Utenzi*, pp. 239–280.

35 UAT. 407/81. Nachlass Hennig (1882–1977). Tagebuch, Teil 2, p. 135. Cf. UAT. 407/82. Nachlass Hennig (1882–1977). Tagebuch, Teil 3, p. 3. Cf. UAT. 407/2,2. Nachlass Hennig (1882–1977). Brief-Tagebuch an die Familie, Teil 2, p. 483. Cf. Maier. *African Dinosaurs*, pp. 38, 55.

36 Cf. Vennen. ‘Arbeitsbilder – Bilderarbeit’, pp. 56–77. Cf. Ohl, Michael and Stoecker, Holger. ‘Taxonomien am Tendaguru. Wie die Berliner Saurier ihre Namen bekamen’. *Dinosaurier Fragmente. Zur Geschichte der Tendaguru-Expedition und ihrer Objekte 1906–2008*. 232–252. Eds. Ina Heumann et al. Göttingen: 2018.

rule. According to Aas, the source material is scarce for every single enterprise as the files of privately owned companies that existed in German East Africa have been almost entirely destroyed. If there are any sources at all, they are comprised mostly of officially published company documents such as annual reports, while governmental files contain some information about these enterprises too. Overall, there were two types of colonial companies in the *Lindi* district that depended on East African workers. The first group was companies that were privately owned by individual European, that is predominantly German and some English and Italian, settlers trying their luck in the German colony. Of those small-scale enterprises, Aas counts fourteen for the entire district between the 1890s and 1914. Unfortunately, the sources available document barely anything else than their mere existence. For the second group of colonial enterprises, more information is available as they were much larger and run as well as owned cooperatively. Primarily, by means of annually published business reports and other publications, Aas provides insight into the business of five larger companies operating in the *Lindi* district: the *Pflanzung Ngambo/Kitunda* (founded in 1895) and the *Plantagengesellschaft Südküste* (founded in 1906), run by Karl Perrot; *Die Ostafrika-Kompagnie* (founded in 1906), with its directorate's most prominent member being Walter von St. Paul-Illaire, a former member of the *Schutztruppe* and already a colonial entrepreneur in the northern districts of German East Africa; the *Plantagengesellschaft Kilwa-Südland*, primarily founded by Dr Schäffer and Carl Peter's associate Joachim Graf Pfeil as well as the President of the *Reichstag* Prof. Paasche and the Principal of Stuttgart's Technical University Prof. Moritz Fünfstück in 1907; and last but not least, *Die Lindi-Kilindi-Gesellschaft mbH*, founded and run by the former District Officer of *Lindi*, Ewerbeck, in 1908, who employed a German called Linder as manager. Despite the better documentation of the cooperatively owned plantations, the sources remain nevertheless extremely patchy. Aas thus cannot give any information about their profitability, for example, but he can nevertheless determine one central research result: The longer the companies existed, the more their management personnel and their business interests converged. "In the end" concludes Aas, during the last few years preceding WWI, "all companies were run by the same people in Berlin"³⁷ who were somehow related to the *Deutsch-Ostafrikanische-Gesellschaft (DOAG)*.

For example, Arthur von Osterroth-Schönberg was not only Chairman of the board of the *Lindi-Handels- und Plantagengesellschaft*, but also member of the administrative board of the *DOAG*. Paul Fuchs, who featured prominently in the foundation of the *Otto* plantation in Kilossa and in the general introduction of cotton to German East Africa, was not only general secretary of the *KWK* but also a member

37 Aas. *Koloniale Entwicklung*, p. 131. Cf. Bald. *Deutsch-Ostafrika*, pp. 114–116.

of the board of the *Südküste* and CEO of the *Lindi-Kilindi-Gesellschaft*. Walter von St. Paul Illaire was not only a member of the board of the *Ostafrika-Kompagnie*, but also a member of the advisory board of the *Südküste*. J.J. Warnholtz was both a member of the board of the *DOAG* and deputy director of the advisory board of the *Lindi Kilindi Handels- und Plantagengesellschaft*. The interconnections between the businesses were therefore significant indeed and Aas is further convinced that the *DOAG* had its hand in many of the companies listed above, and must also have played the decisive role in trading with *Lindi*'s local population.³⁸ Moreover, both the *DOAG* and the *Lindi Kilindi Handels- und Plantagengesellschaft* held large shares of the *Lindi-Schürfgesellschaft*, which employed Bernhard Sattler, who would later be declared as the person who had discovered the initial dinosaur bones near the Tendaguru Mountain.³⁹

With the *DOAG* as the junction of nearly all relevant businesses in the *Lindi* district, it is therefore hardly surprising that the *DOAG* played a central role in the logistics of the Tendaguru Expedition as well. In the course of the palaeontological excavations, any provisions and equipment shipped from Germany to East Africa and finally transported to the Tendaguru Mountain were administered via the company networks of the *DOAG*. The same applies to the transport movement in the other direction. Any dinosaur fossils found at the Tendaguru were stored in a building of the *DOAG*, close to the port of Lindi, before they were ultimately shipped to the harbours of Germany. As far as the Tendaguru Expedition is concerned, the *DOAG* provided all these services tax-free and also forwarded Janensch's and Hennig's mail. The *DOAG* further provided telegraph service between the German palaeontologists and Berlin, telephone services for the German crew of the Tendaguru Expedition within German East Africa, and also housed the German palaeontologists, at no cost, at their facilities. Moreover, the *DOAG* procured porters who would transport the dinosaur fossils from the Tendaguru to the coast.⁴⁰ Finally, the *DOAG* sent both Sattler and one of his *DOAG* colleagues, Mr Besser, to the palaeontological excavation site, where they assisted Janensch and Hennig, especially in the first weeks after the palaeontologists' arrival to East Africa in April 1909. Both Sattler and Besser would prove indispensable for the Tendaguru Expedition as they

³⁸ Cf. Aas. *Koloniale Entwicklung*, pp. 101–133.

³⁹ Cf. Stoecker. 'Maji-Maji-Krieg und Mineralien', pp. 26–27, 30–32.

⁴⁰ Cf. MfN. HBSB. Tendaguru Expedition 2.2. Transport. Cf. MfN. HBSB. Tendaguru Expedition 2.3. Transport/Ausrüstung (Afrika 1910–1912). Cf. MfN. HBSB. Tendaguru Expedition 3.1. Versorgung/Alltag. Cf. MfN. HBSB. Tendaguru Expedition 4.3. Versorgung/Alltag (Jagd). Cf. MfN. HBSB. Tendaguru Expedition 4.5. Versorgung/Alltag. Cf. MfN. HBSB. Tendaguru Expedition 7.4. Finanzierung. Cf. UAT. 407/80, p. 93. Cf. Maier. *African Dinosaurs*, pp. 19, 24, 43, 45, 57, 75, 77. Cf. Vennen. 'Arbeitsbilder', p. 72. Cf. Vennen. 'Auf Dinosaurierjagd', p. 211.

introduced the two German palaeontologists, who had never visited a (German) colony before, to the East African colonial realities. Finally, Janensch and Hennig met many of the *DOAG*'s men mentioned above, either at the Tendaguru or when they visited them in the colony's north. Hennig and Janensch met St. Paul-Illaire there during the first rainy season in Tanga. Of particular note, when visiting the colony's north, the *Lindi-Kilindi Gesellschaft*'s manager, Linder, even recruited workers for the Tendaguru Expedition.⁴¹

Despite their close interconnections and their strong relationship to the Tendaguru Expedition, the overall economic importance of *Lindi*'s enterprises was very low compared with those of the northern half of the colony. In 1914, there were roughly 700 plantations in German East Africa. With nineteen small- and large-scale plantations, of which many were short lived, only a fraction was to be found in *Lindi*. This is also reflected in the number of Europeans living in the *Lindi* district and in the nearby town of Mikindani. With 151 Europeans – 140 Germans – living in these southeastern areas, the European population of *Lindi* had found its peak in the years immediately before WWI. Comparing these numbers to the overall number of 5,336 Europeans living in the entire colony in 1913 – one-fourth of them in the northern districts near Mount Kilimanjaro – illustrates that the impact of the plantation economy for *Lindi* indeed had its limits. This is further shown by juxtaposing these numbers to those of the African population residing in the area: In 1905, the colonial authorities estimated the local African population at 255,469, and the total number of Goans, Arabs and Indians at 431.⁴² Of course, this low number of European plantations and European inhabitants in *Lindi* also entailed that the district's nineteen privately owned businesses had comparatively little impact on the overall socio-economic environment of the *Lindi* area. Being largely dependent on the manpower of individual owners, the viability of the fourteen small-scale plantations was immediately endangered in the event of owner illness. This was very often the case. In this respect, the larger companies had several advantages compared to their smaller competitors, especially regarding financial and human resources. Although the larger companies expanded significantly from 1906 onwards, their rise in economic activity came to a standstill as early as 1912. The number of workers available to the few colonial businesses in *Lindi* simply could not sustain the companies' demand. Consequently, all of the enterprises lamented the recurring 'labour calamity' during the last few years of German colonial rule in East Africa between 1912 and 1914.⁴³

41 Cf. Maier, *African Dinosaurs*, pp. 20, 33, 52. Cf. MfN. HBSB. Tendaguru Expedition 5.1. Korrespondenzen von Janensch und Hennig, pp. 14–15, 18.

42 Cf. Aas. *Koloniale Entwicklung*, p. 93. Cf. Gründer. *Geschichte*, p. 166.

43 Cf. Aas. *Koloniale Entwicklung*, pp. 130–133.

Examining the sources of the five larger companies, Aas observes a sufficient labour supply – meaning a surplus of potential workers – in the final year of the Maji Maji War in 1907, and for some years afterwards. Those seeking work at colonial enterprises in the aftermath of the war appear to have been primarily women, who sought employment out of pure necessity because their husbands had died during or shortly after the war. Now on their own and facing destroyed food provisions and burnt down fields, the women sought survival by working for colonial companies. None of the five larger companies had great difficulty recruiting the workforce necessary until ca. 1911 and did not need to recruit workers from other districts in this period. The situation changed dramatically in 1912, however, when all the companies under investigation complained about the lack of supply of labour and constantly rising wages. As a result, all of them seem to have pressured the colonial authorities to exert force on the local populations to make them work at the plantations. Apparently, the planters succeeded in their concentrated lobbying, as by 1914 the ‘labour calamity’ had been solved without raising any taxes. Regarding plantation work as such, work discipline and harsh punishments for not meeting the demands of colonial plantation owners were of course common in colonial labour processes, and in the *Lindi* district as well. Yet, believing that all African workers came to work only by indirect or direct force is as wrong as believing that all colonial labour was easy work where physical violence and humiliation were not an integral part. Indeed, Aas finds that the great majority of the *Lindi* population was generally not willing to work for colonial enterprises. In fact, interviewing local elders in 1980s *Lindi*, Aas found two further reasons, besides pure necessity, why the population might choose to work voluntarily for German colonial companies, although they were well aware of the realities of colonial labour: One was giving them the ability to pay (cash) taxes, and the other was the ability to buy simple consumer goods, such as clothing. Given the presented source material and its numerical estimates, it is striking to ascertain that the few colonial enterprises of the *Lindi* district were only able to recruit a maximum number of workers of 5,323 in 1911, while there were at least 360,500 people living in the area under investigation at that time. According to Aas, there are three major reasons for this. First of all, plantation labour was generally very hard, and it was always very difficult to win workers for such employment. As illustrated by the comments of the Acting District Officer ten Brink quoted above, potential workers resisted working for the plantations even when faced with starvation. Of course, rather indirect means of force, such as taxing the population, often did not necessarily lead to a work supply that would sustain the colonial businesses in *Lindi*. In cases where the plantations succeeded in their labour recruitment, the planters of the district valued especially the work of the Wayao and the Wangoni. According to the colonial discourse, they were judged

as intelligent and hardworking and when facing a shortage of labour, the latter were often even recruited from the neighbouring district of *Songea* where the majority of the Wagoni lived. By contrast, the Wamakonde and the Wamuera were numerically insignificant as workers for *Lindi's* plantation economy, although they were the majority of the peoples living in the district. According to the colonial discourse, they were judged as lazy, devious and malicious, as they generally succeeded in evading colonial labour discipline if they felt the wish to do so. This leads to the second reason why the plantations' labour supply in the *Lindi* district was insufficient most of the time. As the colonial administration had only very limited resources in exerting comprehensive rule, beyond its governmental centres of administration, both the political and economic infrastructure were concentrated along the coastal strip, north and south of the port town of Lindi, and were very isolated from the hinterland. Thus, vast areas of the *Lindi* district remained largely untouched by the colonial state, and colonial officials could therefore only seldomly pressure the majority of the locally administering *Jumbes*, *Akidas*, *Liwalis* or Chiefs to send workers to the plantations. These deficient resources of the colonial administration to recruit sufficient workers for the plantation economy are strongly intertwined with the third reason why labour recruitment failed among the Wamakonde and the Wamuera. The Wamakonde lived isolated on the difficult-to-reach *Makonde Plateau*, stretching from German East Africa's south widely into Mozambique. Both societies organised themselves in a decentralised manner: They lived overwhelmingly in small villages, which were only loosely connected with each other, and they had no central figure who had authority over every, or even numerous settlements. The German colonial officials were consequently not able to order any local authority to pressure their subordinates to work – or if this was possible, it only applied to fairly small villages with few inhabitants who could potentially be recruited as workers.⁴⁴

Constituting the decisive background for analysing labour supply at the Tendaguru Expedition, there are several conclusions to be drawn from Aas' analysis of the labour supply for plantation businesses in the *Lindi* district between ca. 1905 and 1914. First of all, Aas' work has shown that when the Tendaguru Expedition started in April 1909, the general labour supply of workers in the *Lindi* district was sufficient for large-scale plantations located along the coast. Aas' findings thus indicate that at this beginning stage, labour supply for the Tendaguru Expedition likewise must have been sufficient, as it took place in the same time period and in the same region. Secondly, the labour supply for these plantations of the *Lindi* district remained sufficient until 1912, whereas most of the palaeontological excavations at

44 Cf. Aas. *Koloniale Entwicklung*, pp. 141–163.

the Tendaguru ended as early as 1911. Thirdly, the Wayao and the Wangoni were the most popular plantation workers and tended to take up work to a greater extent voluntarily, and in greater numbers, than the Wamuera and the Wamakonde, whose reputation as plantation workers was very low among the colonial planters. As fourth observation, in times of labour shortage, the colonial officials succeeded in forcing labour from the local populations of *Lindi*, despite their limited resources. Given the porous character of the German colonial state, it is however rather unlikely that the increased pressure on the local populations to work could have been sustained for many years. Although this very last observation must remain rather speculative for now, there is no evidence to the contrary. The 'labour calamity' appears to have been solved by 1914. But as WWI ended German colonial rule in East Africa, it is impossible to ascertain whether the colonial administration would have been able to exert such pressure comprehensively in the entire *Lindi* district and for longer than a few weeks or a few months. All these four aspects are decisive for analysing and understanding the phenomenon of labour at the Tendaguru Expedition in German East Africa's *Lindi* district, especially between 1909 and 1911. They comprise the background to be kept in mind for all the sections to follow.

5.4 The Dependency on East African Expertise

5.4.1 No Minerals but Dinosaurs: East African Discoveries

[. . .] Have I already written to you that one of our people – bang there's someone again, [. . .] because he reports bone finds 8 h east of here, at the foot of the Likonde Plateau and also brings a piece with him. This fits perfectly with the finds I was about to report: One of our people also saw bones in the Lukuledi Valley during the rainy season, about 6 h up from Lindi [. . .]! [. . .] Thus the enormous complex is once again multiplied many times over and, just as naturally, our task. [. . .] Our main concern now is: how do we get rid of the plateaus? A kingdom for a faith that moves mountains! [. . .]

Edwin Hennig – Letter to his mother, Whitsunday 1910.⁴⁵

Stories of discoveries and exploration in European (colonial) contexts have predominantly been established as hero stories of single *white* European men. Accordingly, such heroes endured a great variety of hardships for the sake of God, science or their nation. Already in the Early Modern period, but particularly in the mass media societies of the nineteenth century, these hero stories were welcomed by media producers like publishing houses, and by their audiences all over European societies. The legends of European explorers largely contributed

⁴⁵ UAT. 407/2,2, pp. 321–322.

to the master narrative of western global primacy over the rest of the world and had and still have “the power to influence the way we see the world, its regions and its inhabitants”. Yet, “exploration cannot fully be understood without exemplifying the multiple contexts in which they operated”.⁴⁶ Therefore, each exploration tale, particularly in colonial contexts, must be (re-)assessed by investigating the role of the local people who have remained largely invisible in European historiography and in the history of science. In stark contrast to the traditional European myths, local people played a decisive, if not the predominant role, not only regarding European explorations, but also in other discoveries of relevance for science like fossil discoveries. This holds true for several palaeontological discoveries since the sixteenth century in North America, and also for palaeontological discoveries in Africa: including the discovery of the gigantic dinosaur fossils found at the foot of the Tendaguru Mountain in early 1907 in German East Africa.⁴⁷

In this respect, Holger Stoecker has demonstrated recently that the old established narrative of the Tendaguru discovery is incomplete at best. It has turned out that this flimsy narrative has been passed on for many decades since it was established during the German colonial period. Accordingly, it was the engineer Bernhard Sattler who, while searching for new raw material fields to exploit for his *Lindi Schürfgesellschaft*, failed constantly to find any minerals, but then suddenly discovered curious fossils on the ground. After the news disseminated, all wheels were turned in Berlin and Dar es Salaam to establish the Tendaguru Expedition.

⁴⁶ Kennedy, Dane. ‘Introduction: Reinterpreting Exploration’. *Reinterpreting Exploration. The West in the World*. 1–20. Ed. Dane Kennedy. Oxford: 2014, pp. 6, 8.

⁴⁷ Cf. Kennedy. ‘Introduction’, pp. 1–12. For the East African context cf. Rockel, Stephen J. ‘Decentering Exploration in East Africa’. *Reinterpreting Exploration. The West in the World*. 172–194. Ed. Dane Kennedy. Oxford: 2014. For western ignorance regarding indigenous knowledge about fossil finds in North America cf. Mayor, Adrienne. ‘Suppression of Indigenous Fossil Knowledge: From Claverack, New York, 1705 to Agate Springs, Nebraska, 2005’. *Agnotology. The Making and Unmaking of Ignorance*. 163–182. Eds. Robert N. Proctor and Londa Schiebinger. Stanford: 2008. Cf. Mayor, Adrienne. *Fossil Legends of the First Americans*. Princeton: 2005. For a case study regarding map making and cartography that highlights the significance of indigenous knowledge to European explorations and discoveries in the Indian colonial context. Cf. Raj, Kapil. *Relocating Modern Science. Circulation and the Construction of Knowledge in South Asia and Europe, 1650–1900*. New York: 2007, pp. 60–94. Regarding the negotiating character of colonial knowledge production and the significance of local Indian knowledge for British imperial or rather colonial expertise cf. Sivasundaram, Sujit. ‘Trading Knowledge: The East India Company’s Elephants in India and Britain’. 27–63. *The Historical Journal*, 48, 1. Cambridge: 2005. For a general critical assessment on the role of the invisible individuals involved in science cf. Shapin, Steven. ‘The Invisible Technician’. 554–563. *Scientist*, 77, 6. Harvard: 1989. Web. <http://nrs.harvard.edu/urn-3:HUL.InstRepos:3425945> (2 November 2017). Thanks to Verena Bunkus, Erik Liebscher and Anna-Maria Hünnes (all University of Erfurt) for recommending most of the works cited in this footnote!

Since then, this narrative has contributed to establishing the image of the Tendaguru Expedition as being an up-to-date and immensely successful palaeontological excavation that brought honour to not only German science but also to the German nation. In the 1920s and 1930s, during the Weimar Republic and National Socialism, the Tendaguru Expedition's success was thus a ready-at-hand argument for German colonial advocates to counter the regulations of the Treaties of Versailles, which denied any colonial possessions to Germany in the future. Using the Tendaguru Expedition as an example of successful German colonisation in Africa and the German ability to exert Europe's allegedly civilising mission on the continent, the dinosaur bones of the Tendaguru were turned into artefacts intended to perpetuate the ideal of resuming German colonialism (in East Africa), until the end of WWII. Indeed, even recent research about the Tendaguru has kept many aspects of this colonial narrative. Admittedly, demands to re-establish German colonies overseas quickly vanished in the course of depoliticising policies of the German Democratic Republic after WWII. But the story of Bernhard Sattler being the actual discoverer of the dinosaur bones at Tendaguru remains tenacious.⁴⁸

In fact, the existence of the dinosaur fossils of the Tendaguru had been known to the East African population long before Bernhard Sattler's visit. Stories about the gigantic bones were embedded in the culture of all the populations resident in the *Lindi* district. Accordingly, folk tales reported about an ancient gigantic animal named *majimwi*, *mazimwi* or *ma'imi*, which walked either on two or four legs, was very dangerous, and had threatened the lives of many people in the colony's south. Although the stories were not uniform and often contradictory, even Edwin Hennig himself was convinced that they were somehow connected to the petrified dinosaur fossils found at the Tendaguru hill.⁴⁹ Apart from these folk tales, Holger Stoecker has also convincingly succeeded in correcting the history of the Tendaguru bones' discovery. His research has outlined that Bernhard Sattler had actually not discovered the fossils but was directed to the 'dinosaur cemetery' by one of his East African employees. Of course, there is no doubt that Sattler was an important figure in the events leading to the ultimate establishment of the Tendaguru Expedition and during the initial weeks of excava-

⁴⁸ Cf. Heumann, Ina et al. 'Dinosaurier und Provenienz. Konjunktoren des Kolonialen, 1909–2018'. *Dinosaurier Fragmente. Zur Geschichte der Tendaguru-Expedition und ihrer Objekte 1906–2008*. 255–273. Eds. Ina Heumann et al. Göttingen: 2018. Cf. Stoecker. 'Maji-Maji-Krieg und Mineralien', pp. 26–37. Cf. Maier. *African Dinosaurs*, pp. 1–22, 83–93, 309–334. Cf. Mogge. "Im Deutschen Boden Afrikas.", pp. 125–144. Cf. Mogge. *Wilhelm Branco*, p. 201. Cf. Kretschmann. 'Noch ein Nationaldenkmal?'. pp. 200–212. For further research gaps regarding Eberhard Fraas and the Museum of Natural History in Stuttgart cf. Rösser. 'Knotenpunkte des Kolonialen', pp. 56–61.

⁴⁹ Cf. Hennig. *Am Tendaguru*, p. 134. Cf. UAT 407/80, pp. 63–64.

tions. But in fact, the attention he brought to the petrified bones lying on the surface of the East African ground, not just as ordinary stones, but as dinosaur fossils, was directed by one of his East African employees. Attempting to save his *Lindi Schürfgesellschaft* from bankruptcy, Sattler attempted to find promising raw material deposits that would ensure profitability in the future. Yet, his attempts, starting in 1906, were unsuccessful and remained not very promising for almost a year. According to the available sources, one of Sattler's East African employees felt the engineer's increasing disappointment and sorrow resulting from the unsuccessful quest for raw materials and directed him to a remote place where several huge bones stood out from the sandy soil. Sattler drew a sketch of the scene and sent this picture with a letter to his business partner, Wilhelm Arning, living in Hannover, in March 1907. Arning, as a former colonial officer and member of the *Reichstag*, used his connections in the *Reich's* influential circles to highlight the scientific importance of the fossil finds, besides saving his friend's company from bankruptcy. The palaeontologist, Eberhard Fraas, who happened to be in German East Africa's north as a geological advisor for Heinrich Otto's planned cotton business near *Nyanza* ('Lake Victoria'; cf. Chapter 4), thus inspected the fossils near the Tendaguru and confirmed their quality. Consequently, Germany's academic circles reacted determinedly and it was, particularly, Wilhelm Branca, director of Berlin's Museum of Natural History, who left no stone unturned to enable the Tendaguru Expedition to start its excavations by April 1909. From this moment onwards, contemporary publications and publications of the postcolonial era silenced the decisive role of the East African employee who had actually directed Sattler's attention to the fossils and kept on retelling the story of Sattler's alleged 'discovery'. In fact, directing Sattler to the very remote place of the Tendaguru, which is still barely accessible today, involved not only detailed knowledge of the environment as such. It also needed an awareness of the fact that the petrified dinosaur bones were indeed something uncommon and an almost singular occurrence. Hence, the lion's share of the discovery must be attributed to Sattler's East African employee, whose name is unfortunately not recorded in the sources.⁵⁰ In addition, many of the discoveries made during the Tendaguru Expedition were genuinely not made by Europeans, but by East Africans. Of course, Edwin Hennig and Werner Janensch were the leading palaeontologists, but they were almost the only Europeans among 500 working East Africans, who would discover numerous bones in the area around the Tendaguru and beyond. The majority of the discoveries were made by the many East African workmen, overseers and the preparators.

50 Cf. Stoecker. 'Maji-Maji-Krieg und Mineralien', pp. 28–37.

As revealed by Hennig's letter to his mother quoted above, the excavation area had expanded rapidly from spring 1909 onwards and therefore entailed a dependency on further East African intuition and knowledge for new fossil discoveries. During the ca. two and a half years of excavations, the palaeontologists Edwin Hennig and Werner Janensch employed by Wilhelm Branca's museum in Berlin were the only two Europeans who resided at the Tendaguru permanently. Only in the very first four weeks were they assisted by Bernhard Sattler and Mr Besser of the *DOAG*, and later joined by the geologist, Hans Reck, and the intellectual, Walter Furtwängler, who would also only stay for a few weeks with Janensch and Hennig. For the very isolated area of the Tendaguru Mountain, where the "nearest village Nanundo was two h away",⁵¹ this meant that keeping a mere overview of the entire area and the huge number of fossil find locations was one of the biggest challenges for the palaeontologists. This excludes any mention of close supervision of the East Africans who were working and excavating independently most of the time. By the beginning of September 1909, "a tour of all the workplaces [. . .] [took] up the whole morning and there [were] still new locations"⁵² where Hennig would have liked to start digging right away. The area under excavation expanded gradually and forced the Europeans to soon split up and to lead the excavations at two locations that were far away from each other. By July 1910, Hennig wrote to his mother:

The two most distant ditches are now a long day's march apart. We dig in Kindope 1 h away, Ubolelo 3 h away, and Mtapapa or Kijengere 2–3 h away. I have to add another map. Of course, we cannot check there daily, but we have sent reliable supervisors there. In Mtapapa, I myself was there from 9–11 to get the work going, to Ubolelo, Janensch wants to go tomorrow. In both places we leave one tent all the time, so that we can have lunch without taking a large number of porters with us or stay overnight.⁵³

Only two months later, in early September 1910, the most distant places like Ubolelo could not be visited on a daily basis anymore. Janensch and Hennig were happy if they could pay them a visit every month. From this very same month onwards, it often took the two German palaeontologists several days to be able to even take a brief look at the spectacular fossil finds, not only because of the ever rising number of finds, but especially because of the ever expanding area under excavation.⁵⁴ In the course of excavations between 1909 and 1911, finds were reported from places as far away as Masasi (ca. eighty km), places in the neighbour-

⁵¹ UAT. 407/2,1, p. 138.

⁵² UAT. 407/2,1, p. 172. Cf. UAT. 407/80, pp. 9, 11, 35, 78.

⁵³ UAT. 407/2,2, p. 353. Cf. UAT. 407/80, pp. 35, 78. Cf. UAT. 407/81, pp. 10–11, 33.

⁵⁴ Cf. UAT. 407/2,2, pp. 373, 384.

ing *Kilwa* district (ca. 150 km) and also from Ngerengere, a station of the newly built *Central Railway*, which was ca. 600 km away from the Tendaguru Mountain.⁵⁵ The distance of these find locations from the Tendaguru often meant that Janensch and Hennig had to leave the mountain for many weeks at a time. Of course, not all of these distant places – maybe except for Masasi – were part of the Tendaguru Excavations proper, but they show that close supervision and control of the work of East Africans was simply impossible. It is therefore more than obvious that not only Hennig and Janensch made the spectacular dinosaur fossil finds. Quite the contrary: The majority of the fossils, including the most spectacular ones like the skull of the *Brachiosaurus*, were found by East African overseers and ordinary workers. In contrast to the colonial myths, Janensch and Hennig would sit in the camp at the Tendaguru most of the time and do the paperwork, where their employees would approach them to report another fossil find, as shown in the incident quoted above. Thus, not only the initial bones resulting in the Tendaguru Expedition were discovered thanks to an East African. Moreover, the Tendaguru Expedition relied heavily on East African agency, knowledge and intuition for discovering new dinosaur fossils throughout the entire endeavour. Although Janensch and Hennig also found some bones every now and then themselves, their work was in essence limited to administration, bookkeeping and science, while the actual discoveries were made by East Africans.

Besides the vastness of the territory under excavation, the weather required Hennig and Janensch to rely on East Africans as well. Just like at the *Otto* plantation or at the *Central Railway's* construction sites, the excavations at the Tendaguru could only be carried out in the absence of heavy rainfalls. Especially during the big rainy season – *masika* – starting in March and ending in May, hardly any excavations could be conducted, because the occasional large downpours filled the ditches with water regularly and made any palaeontological work impossible. Also, during the small rainy season between October and November with comparably low precipitation, the German palaeontologists left the Tendaguru. Particularly during *masika*, however, not only did Hennig and Janensch leave for vacations in the northern districts of *Usambara*, for example, but their workers also travelled long distances to plant the fields at their homes. In turn, the months-long absences of the two German palaeontologists and the vast majority of workers meant that only a small number of the staff stayed at the Tendaguru to protect the ditches, the entire camp, its provisions and their storage, away from weather, animals and man. As a result, during *masika*, the population of the Tendaguru excavation camp declined from its maximum of ca. 800 people

55 Cf. UAT. 407/81, pp. 119–135. Cf. UAT. 407/82, pp. 3–27. Cf. UAT. 407/2,2, pp. 325–330, 490–500.

(including the workers' families) to only a dozen. During these months, the expedition was entirely the responsibility of Hennig's and Janensch's East African senior overseers and preparators, who played not only an outstanding role during the rainy season but also during the dry season when the largest share of work was done.⁵⁶ The following section deals with their central role.

5.4.2 East African Overseers and Preparators

I visited the trenches along the way first. Found a long-serving overseer asleep who was extremely surprised by my appearance.

Edwin Hennig. Diary Entry. 12th June 1910.⁵⁷

The work at the Tendaguru Expedition required a large number of skilled men. Those who bore the lion's share of the Tendaguru excavations were East Africans whom Janensch and Hennig either described as 'overseers' or 'preparators'. The labels are somewhat misleading as there was no clear-cut boundary between the occupation of an overseer or preparator. As far as the sources can tell, overseers and foremen generally had longer experience at the Tendaguru Expedition than the ordinary workers under supervision. Most of them were among the very first men who had been delivered to Janensch and Hennig by Sattler, when the two German palaeontologists arrived at the port of Lindi in April 1909. If the workers proved themselves reliable, Janensch and Hennig delegated tasks of higher responsibility to them gradually, until they were trusted and described as 'foremen' or 'overseers'. In general, the overseer's task was to put into practice the German palaeontologists' plan of excavating the fossil-prone ditches in the right order and in the right manner. Each overseer was generally in charge of one ditch. He had to report regularly about new fossil finds, the overall digging progress and had to instruct as well as correct the work of their subordinate men digging for dinosaur bones. Sometimes, overseers were the very first to put an eye on a newly found fossil far away from the main camp, often drawing a sketch of it and delivering a

⁵⁶ Cf. UAT. 407/81, pp. 1–4, 119–129. Cf. UAT. 407/2,2, pp. 303–320. Cf. UAT. 407/2,1, pp. 193–194, 223, 238–239, 265–266. Cf. Hennig. *Am Tendaguru*, p. 43. Cf. Stoecker, Holger. 'Koloniales Kronland und Ausfuhrverbot. Wie die Fossilien vom Tendaguru für die deutsche Wissenschaft gesichert wurden'. *Dinosaurier Fragmente. Zur Geschichte der Tendaguru-Expedition und ihrer Objekte. 1906–2018*. 38–57. Eds. Ina Heumann et al. Göttingen: 2018, p. 53.

⁵⁷ UAT. 407/81, p. 17.

report to the camp. On top of this, the overseers also recruited new workers or porters needed for the Tendaguru Expedition, if they were urgently required.⁵⁸

Of course, the tasks of an overseer included the extraction and preparation of fossils in order to transport them to the coast. Janensch and Hennig completely relied on the work of these foremen as the vast area under excavation entailed the relative absence of the two German palaeontologists. Yet, just like any scientific endeavour, the Tendaguru excavations also required a certain amount of supervision. Given the vast distances between the ditches, Hennig and Janensch had to delegate many of their tasks to the skilled and experienced overseers. Like any African share in colonial labour processes, the role of the skilled East African overseers and palaeontological preparators has long been absent in research about the Tendaguru. While Hennig did express appreciation of African labour in his book about the expedition published in 1912, few historians have ever investigated more deeply into the issue. One exception is the article published by Michael Ohl and Holger Stoecker that analyses the naming of the dinosaurs and dinosaur fossils that were found at the Tendaguru. Many dinosaur fossils were initially named after these East African overseers who had discovered them in the first place. Only afterwards were they renamed according to the nomenclatures of European science and the customs of the German society. Almost all the bones initially carrying the names of East African overseers and preparators working at the Tendaguru were ultimately renamed. Today, they mostly bear the names of famous German palaeontologists, major donors of the Tendaguru Expedition or 'colonial heroes' like General Paul von Lettow-Vorbeck.⁵⁹

Whereas the actual procedure of how dinosaurs are named is clearly regulated, the choice of the name itself is arbitrary. Generally, scientists do not name dinosaur fossils immediately at the find location, but they follow a labour-intensive procedure. After the newly found fossils have undergone detailed investigations, they must be compared and classified in accordance with those species known so far. Only afterwards is the ultimate scientific name applied to a recently found fossil. Sometimes, this process requires decades. For instance, the biggest dinosaur skeleton currently exhibited at the Berlin's Museum of Natural history, the *Brachiosaurus Brancai*, consists of two parts: *Brancai* is the name of Wilhelm Branca, head of Berlin's Museum of Natural History during and after the Tendaguru Expedition, and the scientific nomenclature *Brachiosaurus*, which indicates the dinosaur's palaeontological species and genus. But initially, after the immediate discovery of a

⁵⁸ Cf. UAT. 407/80, pp. 87, 91. Cf. UAT. 407/81, p. 76. Cf. UAT. 407/82, p. 15. Cf. UAT. 407/2,2, pp. 353, 384. Cf. Hennig. *Am Tendaguru*, pp. 31, 36–37, 39–40.

⁵⁹ Cf. Hennig. *Am Tendaguru*, pp. 7–11. Cf. Ohl and Stoecker. 'Taxonomien am Tendaguru', pp. 233–237.

dinosaur fossil at the Tendaguru, it was given an interim name, bearing aspects of the local context, for example being named after the East African preparator who had discovered the fossil first. Yet, the farther the recently discovered dinosaur fossil was moved from its initial find location to places like Berlin's Museum of Natural History, and the more time that passed after the fossils' discovery, the more a fossil became part of the European scientific museal context and blurred the immediate context of discovery. Through this process described as 'translocation' by Ohl and Stoecker, the name of the dinosaur fossil is changed according to the standards of the museal European context.⁶⁰ As far as the phenomenon of labour at the Tendaguru is concerned, the different nomenclatures are tell-tale. Especially the interim names initially given to the dinosaur fossils highlight the importance and the agency of the East Africans involved in the excavations, and reveal much about the global history of labour. As a matter of fact, the interim names reveal the context of their actual excavation. Such interim names were also of great importance to Janensch and Hennig, when working at Tendaguru. On the spot, the interim name of a fossil helped the palaeontologists keep an overview of the finds and an accurate record of the specific find locations in the areas under excavation. Although the interim names used by Hennig and Janensch for the Tendaguru dinosaur fossils vanished over the years and did not go into the books of palaeontology, science, or history for over 100 years, these interim names give significant information about those East African foremen and preparators who were indispensable for the German palaeontologists during the Tendaguru Expedition.⁶¹

The place names of the find locations, like Mtapapa, Nterego and Ligoma, provided the dinosaur interim names *Ligomasaurus*, *Nteregosaurus Oedipus* and *Mtapoiasaurus* for the corresponding dinosaur skeletons. Apart from revealing the actual find locations, such interim names often also revealed the presence and the agency of East African protagonists at Tendaguru. Among others, there was the *Nyororosaurus*, bearing the name of the overseer Seliman Nyororo, who discovered a skeleton on 24 September 1909. Another skeleton was named after the trusted preparatory, Salim. According to Hennig's diary, Salim had already discovered an "exceptionally fortunate find location [. . .] by himself at the north-eastern side of the Tendaguru" two months earlier on 22 June and "exposed it splendidly". By September of the same year, this find location had "proven itself repeatedly" and finally "turned out more and more to be a treasure chest."⁶² The *Mohammadisaurus* received its name from the overseer Mohammadi Keranje,

⁶⁰ Cf. Ohl and Stoecker. 'Taxonomien am Tendaguru', pp. 233–237.

⁶¹ Cf. Ohl and Stoecker. 'Taxonomien am Tendaguru', pp. 234–236.

⁶² UAT. 407/80, pp. 31, 33. Cf. Ohl and Stoecker. 'Taxonomien am Tendaguru', p. 237. Cf. Maier. *African Dinosaurs*, p. 35.

who discovered two large skeletons in August 1909, whereas the *Salesisaurus* was exposed under the surveillance of the overseer Salesi in September 1909. Then, there was the *Selimanosaurus*, named after the preparator, Seliman Kawinga, who led the excavations from October 1909 onwards. In fact, apart from these names, there exists hardly any other source that could provide more details about the actual role of these overseers. Yet, these interim names are still enough evidence to prove the indispensability of the overseers involved at the excavation works at Tendaguru.⁶³

Sometimes, however, the interim names of the dinosaurs rather veil the agency of the African protagonists involved. This applies for the skeleton, which was initially called *Blancocerosaurus*, and whose bones would ultimately become the largest parts of the *Brachiosaurus Brancai*, named after Wilhelm Branca. It turned out to be the largest skeleton of the Tendaguru and is still standing in the centre of the Atrium of Berlin's Museum of Natural History. Despite the nomenclature currently in use, this skeleton was unearthed by the Tendaguru head supervisor, Boheti bin Amrani, from October 1909 onwards. Boheti was the leading overseer and preparator with the greatest authority and autonomy, who worked not only for Hennig and Janensch from the very beginning, between 1909 and 1911, but also until the very end of the German expedition to the Tendaguru in 1913 under Hans von Staff and Hans Reck. Whenever the German palaeontologists left the Tendaguru for holidays or for other business in Lindi, they were represented by their "virtuous Boheti" or "our Boheti",⁶⁴ as Hennig as well as Janensch call him repeatedly in their diaries and letters. In turn, whenever Boheti left the Tendaguru himself, for example for the Ramadhan holiday, Hennig longed for his return, as on 29 October 1910: "Boheti comes back to the camp. At last! His absence is a part of our time that really seemed long!" It is therefore not very surprising that Boheti was trusted with the preparation of the skeletons that appeared the most spectacular, especially when they promised parts of or a complete dinosaur skull. Moreover, Boheti discovered many new dinosaur fossils himself and Hennig also named one entire excavation spot the "Boheti ditch".⁶⁵

As early as 1909, the two German palaeontologists even wondered if it was possible to take Boheti to Germany, as Boheti himself was curious about life in Europe and his knowledge of the Tendaguru fossils had really prepared him for

⁶³ Cf. Ohl and Stoecker. 'Taxonomien am Tendaguru', p. 237. Cf. Maier. *African Dinosaurs*, p. 35.

⁶⁴ UAT. 407/81, p. 147. MfN. HBSB. 9.2, p. 8. UAT. 407/2,2, p. 369.

⁶⁵ MfN. HBSB. 5.1, p. 86, cf. p. 215. UAT. 407/80, p. 83. UAT. 407/81, p. 76. Cf. UAT. 407/80, p. 10, 19–20, 83. Cf. UAT. 407/81, p. 145. UAT. 407/2,2, pp. 374, 479. Cf. UAT. 407/80, pp. 147, 164. Cf. UAT. 407/2,2, p. 374, 479. Cf. Ohl and Stoecker. 'Taxonomien am Tendaguru', p. 239. Cf. Maier. *African Dinosaurs*, pp. 42, 81.

further preparation work in the Museum of Natural History in Berlin – a thought that never materialised, however. Nevertheless, when Hennig and Janensch left East Africa for good and returned to Germany in early summer 1911, Boheti would also be put in charge of several unfinished tasks: He and a few dozen experienced workers finished the excavation of some pits and organised the transport of the unearthed dinosaur bones via the network of the *DOAG* to Germany. As soon as Branca and his team in Berlin had gathered another 50,000 Marks for another smaller Tendaguru Expedition between 1912–1914, which was primarily concerned with geographical research and complementary excavations only, Boheti remained indispensable for the German palaeontologists as an able and experienced local point of contact. Later, instead of Janensch and Hennig, Boheti welcomed the geologist Hans von Staff and even later, the volcanologist, Hans Reck, and introduced them to the East African work environment. After WWI, when the vast majority of the former German East Africa had become a territory of the League of Nations under the supervision of Great Britain, British palaeontologists resumed excavations in the Tendaguru area between 1923–1931 and turned to Boheti's expertise. In turn, this means that Boheti was one of the very few people – or maybe even the only person – who had worked for all palaeontological Tendaguru Expeditions throughout almost twenty years. Whereas all the other interim names used by Hennig and Janensch mentioned East African expertise only for a very short period of time before the fossils were baptised with European names, Boheti was permanently honoured by the palaeontologist Kristian Remes in 2007. Establishing a new species of dinosaurs 100 years after its excavation at the Tendaguru, Remes used the epithet *Australodocus Bohetii* to honour Boheti's palaeontological work in East Africa. However, the decisive role of most of the East African overseers and preparators is still veiled by the scientific nomenclature, which honours people like Janensch, Branca and Hennig instead.⁶⁶

Besides the scientific nomenclature that honoured almost exclusively Europeans, the interim names could also veil the agency of East African individuals: Whereas the interim name of the *Mtapoiasaurus* bears the name of the place where it was found, Mtapai, it does not reveal the name of the overseer, Salim Tombali, who not only discovered it in September 1909 but who would also become responsible for the subsequent excavation of the entire ditch in which the skeleton was found. Finally, there were also names that point to other aspects

⁶⁶ Cf. Maier. *African Dinosaurs*, pp. 40, 85–107, 215, 217, 221–241. Cf. Ohl and Stoecker. 'Taxonomien am Tendaguru'. pp. 241–253. Cf. Heumann, Ina et al. 'Gespräch. 225 Tonnen Gestein. Ein Gespräch mit Daniela Schwarz, Kustodin der Tendaguru-Sammlung'. *Dinosaurier Fragmente. Zur Geschichte der Tendaguru-Expedition und ihrer Objekte 1906–2008*. 276–291. Eds. Ina Heumann et al. Göttingen: 2018, pp. 287–288.

that are decisive for analysing the phenomenon of labour at the Tendaguru as they reveal the role of East African administrators in the service of the colonial administration. The *Abdallahsaurus*, for instance, was either discovered by the preparator Abdallah Kimbamba or by Sefu Abdallah. The latter not only worked as preparator at the Tendaguru Expedition, but he was also a governmental *Jumbe* and later also Janensch's *boy*. Sefu Abdallah's occupation as *Jumbe* was decisive in declaring potential find locations around the Tendaguru, as so-called *Kronland* (crown land), turning it from private property into property of the colonial government in German East Africa. To prevent foreign colonial powers like Great Britain from sending their own scientists to excavate the dinosaur fossils, the crown land declaration aimed at keeping foreigners out of the colony and thereby reserved the best bits of the dinosaur sensation for the honour of the German *Reich*. Turning the vast area of 3,500 ha into crown land also meant that East African people were not allowed to reside on the land without special permission. The surviving files suggest that while the Maji Maji War had led to massive population loss in this region, some people still living there were indeed expelled from the excavation area. Serving as *Jumbe* at the lowest levels of the colonial administration, Sefu Abdallah – along with his fellow *Jumbes*, the *Akida* Saadallah, and *Lindi*'s District Officer Wendt – signed the document that ultimately turned the area into crown land and implicitly forced the local people off their land.⁶⁷

This raises the question of the backgrounds of those East Africans who actually became overseers or preparators at the Tendaguru Expedition, and how they were situated in the colonial context. Although this question cannot be finally settled in this study, as the sources do not provide for all-encompassing results, it seems that a substantial number of the overseers and preparators were people who had already collaborated with the German colonial administration before the beginning of the Tendaguru Expedition. This is of course the case regarding the former *Jumbe*, preparator, and *boy* Sefu Abdallah, but also applies to the preparator Sadallah. Although nothing is known either of Sadallah's work at the Tendaguru as such, or his life before the palaeontological excavations, the remaining sources tell us that Sadallah had been loyal to the German forces during the Maji Maji War, for instance. In contrast to this patchy research result, there are some details available regarding the life of Sefu Abdallah. Accordingly, he had lived on the East African island of Mafia, off the Tanganyikan coast, in the 1890s, where he had owned fifty-five slaves. Moreover, he had owned a "small plot of land" in the *Lindi* district before and during the German colonial rule. Just as Sadallah's and

⁶⁷ Cf. Stoecker. 'Koloniales Kronland', pp. 38–55. Cf. Ohl and Stoecker. 'Taxonomien am Tendaguru', pp. 232–253.

Sefu Abdallah's names suggest an Arabic background, the same can be assumed for Hennig's and Janensch's superintendent Boheti: According to the historian Maier, Boheti had been "[p]art Arab",⁶⁸ suggesting that he, like Sadallah and Sefu Abdallah, was a member of the coastal Arab-Swahili elite that had dominated East African societies as well as its economy and politics in pre-colonial times. After the Swahili-Arab elite had to surrender, as they had been defeated by German troops in the late 1880s and early 1890s, a substantial number tended to become involved in the lower ranks of the German colonial administration, either as *Jumbe*, *Akida* or *Liwali*.⁶⁹ The assumption that most of the overseers and preparators were either Swahili or Arab is further supported by a partial list kept by Janensch in 1910 that sets out the quarries and their responsible overseers. Although it is almost impossible to separate the Swahili language entirely from Arabic, as nearly forty per cent of the Swahili vocabulary derives from Arabic, Janensch's list of overseers may help to indicate the origin of these most important East Africans at the Tendaguru. In total, the list has twenty-two names of East African overseers. Of those twenty-two, only the name of the overseer Laa Tatu⁷⁰ has no obvious Arabic element, whereas eight have clearly Arabic sounding names, like the overseer Issa bin Salim. The remaining eleven names obtain one element from Arabic and another from an African Bantu language, like the name of the overseer Mohammed Ngaranga.⁷¹ Especially, members of this last group may have been Wanyamwezi, for example originating from central Tanganyika, who may have adopted the Muslim faith and, therefore, took an Arabic name. Nevertheless, their conversion to Islam, indicated by their name alone, already shows their relative proximity to the Swahili Arabic elite of the East African coast and their relative cultural distance from the people of the hinterland.

But other groups loyal to the German colonisers seem to have been involved at the Tendaguru, too. It is worth noting that Edwin Hennig reported of a "few overseers" at the Tendaguru Expedition who had been *Askari* of the German colonial military before coming to the Tendaguru. This further suggests that especially

⁶⁸ Maier. *African Dinosaurs*, p. 25.

⁶⁹ According to the colonial military officer Hans Paasche, the involvement of the Arab-Swahili elite in the German colonial administration was the reason why they became targets of Maji Maji attacks. Cf. Paasche. "Der Aufstand", pp. 52, 66, 74. Cf. Glassman. *Feasts and Riot*, pp. 1–54, 249–270. Cf. Casco. *Utenzi*, pp. 183–238.

⁷⁰ Laa tatu (Swahili): La(a) = no!; tatu = three; Laa Tatu = "three times no!"; "La" also means "no" in colloquial Arabic, however. Thanks to my colleague Sarah al-Taher (Max-Weber-Centre University of Erfurt) for her help in this respect.

⁷¹ Cf. Maier. *African Dinosaurs*, p. 66. Cf. also Letter of Hennig to Janensch 30 July 1911 featuring five porters and one craftsman, who were employed for the Tendaguru Expedition. Five of them have clearly Arabic names. UAT. 407/2,2, p. 492.

those East Africans who had already established closer connections to the colonial administration would become overseers or preparators at the Tendaguru.⁷² The same can be said for Hennig's scribe Claudio, who was probably neither an *Askari* nor an Arab, nor a Swahili. Yet, Claudio also had relative proximity to German colonialists before coming to the Tendaguru. He was one of up to three scribes working for Hennig and Janensch who "kept worker attendance records, marked packing crates, and maintained an inventory of excavation tools. They were required to record the quantity and sale of grain in camp as well."⁷³ The Christian name, Claudio, suggests he was a Christian convert and/or former missionary pupil, who were popular among colonialists for their reading and writing skills. Unfortunately, Claudio's individual background and those of the other two scribes – one of the others was named Matiri – must remain in speculation for now, as only patchy files and one photo survives in the archives under investigation.⁷⁴ Nevertheless, they were probably working in close coordination with Hennig and Janensch, just like the already mentioned overseers and preparators and the *boys* Sefu, Wilhelm and Ali. As the *boys'* role will be illustrated in the following section, it is important to highlight here that there were also numerous preparators, overseers and foreman, whose backgrounds and names are not conveyed by the files. They either appear as "old overseers" – meaning long-serving overseers – in Hennig's diary and letters, or as "Wangoni overseers", for instance. Whereas one Wangoni overseer, who had named himself "Tendaguru", is referred to in person in Hennig's documents, it is beyond doubt that many African preparators, having had decisive roles at the Tendaguru excavations, are not mentioned in the sources at all.⁷⁵

Furthermore, obtaining a decisive role in the Tendaguru Expedition does not mean that general mechanisms of colonial rule did not still apply. Although Janensch and Hennig relied on their East African overseers and workers, colonial hierarchies prevailed and characterised the relationships between the German palaeontologists and their leading East African employees. When excavating in the *Kilwa* region in August 1911, Hennig enquired about work statuses and asked his "preparators, whether anyone want[ed] to return to the Tendaguru, because there [was] not enough work [in Kilwa] yet; answer: 'Man does not want to die,

72 UAT. 407/2,1, p. 175. Hennig was delighted that they allegedly instilled some "Prussian drill" into the ordinary workers. For a detailed analysis of the *Askari* cf. Moyd. *Violent Intermediaries*. Cf. Michels. *Schwarze Deutsche Kolonialsoldaten*.

73 Maier. *African Dinosaurs*, p. 32.

74 Cf. UAT. 407/2,2, p. 500. Cf. MfN. HBSB. Tendaguru Expedition. Konvolut Tendaguru (1694), Expeditionsverlauf- und dokumentation (421), Fotoalben (193), "Schreiber Claudio und Matiri mit Packern vor dem Knochenmagazin".

75 UAT. 407/80, pp. 28, 89–90 cf. p. 87. UAT. 407/81, pp. 11, 135, cf. p. 87.

but God lets him die. You are God here, what are you asking us?”’. The answer left Hennig puzzled and made him complain about “the power [. . .] they put in our hands themselves.”⁷⁶ In fact, Hennig used his power as a member of a German colonial endeavour every day to fulfil his tasks. This prevalence of colonial power at the Tendaguru Expedition is revealed by taking a closer look at both the topography of the Tendaguru (worker) camp, and the work relationships between Hennig and his personal servants.

5.5 ‘We Could Have Employed Many More’: Labour and Command at the Tendaguru

5.5.1 Residing on the Tendaguru: A Colonial City Upon a Hill?

With joyful astonishment I see that culture may penetrate but does not destroy. Europe and Africa live sharply separated from each other. Popular life [. . .] shows itself everywhere with full immediacy. In Dar es Salaam we [had] the incredibly interesting sight of the ‘goma’ (dances) for the unveiling ceremony of [Herrmann von Wissmann’s] monument. The wretches probably do not know that they celebrate their oppressor.

Edwin Hennig. Letter to his mother. On board the ‘Feldmarshall’ April 5th, 1909.⁷⁷

The camp at the Tendaguru resembled the topography of other colonial settlements. Like Clement Gillman’s construction camp at the *Central Railway* and the arrangement of *Otto’s* cotton plantation near Kilossa, at the heart of any ideal-typical colonial settlement was the idea of racial segregation that would separate the colonisers from the colonised, to maintain and represent the racist colonial hierarchy. The perceived necessity to separate European from African was deduced from popular racist and Social Darwinist theories and for so-called ‘hygienic considerations’. Accordingly, a too close interaction between the races would allegedly harm the *whiteness* of the Europeans and the colonisers, who therefore feared they would ‘degenerate’ to a lower racial level. Whereas all these ideas about such a colonial topography could be found in the design of the settlement at the Tendaguru Mountain throughout the entire excavation process, there seem to have been two major phases: The first phase lasted from the arrival of the Europeans Sattler, Besser, Hennig and Janensch at the Tendaguru in April 1909 until the end of the first *masika* at the turn of April to May 1910. The second phase started in spring 1910 and lasted until the very end of the palaeontological excavations of the Tendaguru Expe-

⁷⁶ UAT. 407/2,2, p. 500.

⁷⁷ UAT. 407/2,1, p. 87.

dition. Before the initial arrival of Sattler, Hennig and Janensch at the excavation site in early 1909, they had sent a caravan of ca. forty porters to the Tendaguru Mountain to prepare a camp for the European palaeontologists and their East African overseers, preparators and ordinary workers. As soon as this caravan had arrived at the excavation site, they cleared the ground, built bamboo huts as shelter for the workers, erected (food) storages and a kitchen in the same manner, and covered these with braided grass roofs. When the party of Europeans arrived some days later, the new arrivals pitched their tents next to the huts and dwelled close to the workers for the time being. This place remained at the foot of the Tendaguru Mountain because the vast majority of the abundant deposits of dinosaur fossils lay nearby. The Tendaguru hill is roughly 100 metres high and was about a quarter of an hour's walk north and sat enthroned over the palaeontological camp, which was situated in an isolated area, roughly two hours away from the nearest village. With an increasing number of workers and the steady arrival of their women and children, footpaths were cut into the surrounding bush, and further land was cleared to enlarge the camp. By the end of April, the crew oversaw the erection of the so-called 'bone hut' that sheltered both the often-porous fossils from weather and the workers who used the space to pack fossil loads for portorage to the coast.⁷⁸ Moreover,

[a] round grass roofed shelter with open sides served as a workplace for the Germans [and] Sattler arranged the laborers' huts according to tribal affiliation to avoid conflicts. [These 'tribal' districts] were built in long orderly rows near the tents of the Germans, with sufficient space left between dwellings to prevent the spread of fire.⁷⁹

In the end, there were five different quarters for the workers that each housed one specific ethnicity or 'tribe': One for the Wayao, one for the Wangoni, one for the Wamakwa, one for the Wadonde and one for the Wamuera. To enjoy the view from the top of the Tendaguru hill over the flat bushland surrounding the single mountain, superintendent Boheti gave an order to create steps for a stair leading uphill from the camp. On the top of the Tendaguru, the European crew and their servants would occasionally dine alone or with other European visitors, celebrate birthdays or Christmas, finish administrative work, or pursue hobbies like painting for recreation. After the first rainy season, Boheti, together with roughly a dozen men, remained in the camp to guard the tools, the grain stocks, and two hundred fossil loads ready for transport to the coastal town of Lindi.

⁷⁸ Cf. Maier. *African Dinosaurs*, pp. 24–27, 46–47, 53. Cf. Hennig. *Am Tendaguru*, pp. 18–20, 25. Cf. UAT. 407/80, pp. 11–12. Cf. UAT. 407/81, pp. 2–3, 71. Cf. UAT. 407/2,1, pp. 100–101. Cf. MfN. HBSB. 9.2, pp. 10–11. Cf. MfN. HBSB. 5.1, pp. 4–7, 74, 86. Cf. MfN. HBSB. Tendaguru Expedition 10.4. Druckmedien, pp. 133–134.

⁷⁹ Maier. *African Dinosaurs*, p. 27.

Moreover, these men repaired the huts and prepared everything for further excavations and an anticipated increasing number of excavated fossils. They thus built a larger ‘bone hut’ to store the bones ready for transport. More importantly, regarding the colonial topography, the rainy season crew was ordered to erect buildings for the Germans at the top of the Tendaguru hill.⁸⁰

This location, which Hennig regarded as a “gift from the gods”,⁸¹ was not only turned into the new residence for the German palaeontologists for the sake of the splendid view and the enjoyment of their free time. Rather, colonial discourses about hygiene that intermingled with rational considerations about health and safety were decisive for the relocation. Up on the hill, the wind protected Hennig and Janensch from malaria-prone mosquitoes and other insects as well as from potential fires in the workers camp, which had once come close to the palaeontologists’ tents. In addition to these points, the Germans also wanted to isolate themselves deliberately from the noises of potential workers’ *ngomas* and to live a distinguished colonial life in the countryside of German East Africa.⁸²

[N]ow we are living in our precious seat again. We are the East African nobility: [. . .] ‘The Lords of Tendaguru’. In proper style we now build our castle on the hill that was born for it. On the top of the hill is our magnificent viewing pavilion and on the south foot we set up our personal camp, two small houses for the tents, one for the boys, kitchen and pantry. A few steps lead up to the dining room, the same round pavilion as we used to live in. So, an incredibly homely and stately castle is being built, which offers a beautiful view to the east and south and will itself be quite picturesque. A wide ramp leads quite steeply up. All the preparatory work has been done with skill and taste by Boheti in our absence and we are busy with the difficult work of drawing up the plans.⁸³

The self-perception of belonging to a local colonial elite that ruled over a perceived quasi-kingdom was widespread in written testimonials of Germans and other Europeans living in the colonies. Frequently, this view found its expression in representative buildings situated on a hill, enabling the colonial ruler to observe the land quasi-majestically.⁸⁴ Hennig’s statement reveals that he and Janensch apparently shared this perception with their fellow Germans living in East Africa, as Hennig also described himself as “absolute ruler of the Tendaguru”,

⁸⁰ Cf. Maier. *African Dinosaurs*, pp. 24–27, 46–47, 53. Cf. Hennig. *Am Tendaguru*, pp. 18–20, 25. Cf. UAT. 407/80, pp. 11–12. Cf. UAT. 407/81, pp. 2–3, 71. Cf. UAT. 407/2,1, pp. 100–101. Cf. MfN. HBSB. 9.2, pp. 10–11. Cf. MfN. HBSB. 5.1, pp. 4–7, 74, 86. Cf. MfN. HBSB. 10.4, pp. 133–134.

⁸¹ UAT. 407/2,1, p. 100.

⁸² Cf. Maier. *African Dinosaurs*, p. 53. Cf. UAT. 407/80, pp. 28–29. Cf. MfN. HBSB. 5.1, pp. 74, 86.

⁸³ UAT. 407/2,2, p. 308.

⁸⁴ Cf. Röscher. ‘Juristisches Seminar’. Cf. Itandala. ‘African Response’, pp. 19–25. Cf. Tambila, Kapewa, I. ‘The German Invasion and Occupation of East Africa. Policies, Processes and Tactics’.

when 'co-souverain' Janensch had gone to Lindi, leaving Hennig behind for two weeks as the only European at the excavations.⁸⁵

As well as establishing this 'majestic residence', relocating the European camp up on the hill entailed distancing the two German palaeontologists from their East African workers. This social distance prevailed at the Tendaguru from after the first rainy season until the end of the excavation. It was in line with other colonial topographies, typical for colonial towns, such as Gillman's *Central Railway* construction camp or the design of the *Otto* plantation near Kilossa. Describing his 'homely and stately castle' on the Tendaguru hill, Hennig does not give any clues that would reveal his general agenda to segregate Europeans from Africans in the Tendaguru camp. Yet, other passages of his self-narratives suggest that the establishment of a racist colonial topography for the Tendaguru camp was indeed an important aspect for Hennig. Echoing Central European discourses claiming that the sphere of the African continent emanated from Mediterranean countries like Greece or Italy, Hennig likewise complained bitterly about the "complete mixture of races that knows no home" as soon as he had reached the harbours of Naples and Marseilles on his voyage from Germany to East Africa in spring 1909. Hennig's discontent grew steadily, especially when his steamer anchored in Port Said and in Aden. When hearing from his fellow passengers on board that "the [. . .] order of German East African ports [. . .] ma[de] an exception among all other colonies", Hennig, himself part of a German colonial endeavour, rejoiced of course, and felt at home immediately in the allegedly well-ordered German sphere in Dar es Salaam, where the races lived "sharply separated from each other".⁸⁶

Hence, on Hennig's part, clearly separating the European sphere from the African residential area in the Tendaguru camp was not only done for the enjoyment of the marvellous view. It was certainly also done for the sake of establishing a camp near the excavation site that followed the ideals of colonial topographies. That Hennig and Janensch further allotted each ethnic group employed as workers at the Tendaguru their own residential areas, further strengthens this argument. Just as major colonial settlements like Dar es Salaam created separate residential areas for Europeans, Indians and Africans, Hennig and Janensch established dis-

Studien zur Geschichte des deutschen Kolonialismus in Afrika. Festschrift zum 60. Geburtstag von Peter Sebald. 501–520. Eds. Peter Heine and Ulrich van der Heyden. Pfaffenweiler: 1995, pp. 503–513. Cf. Pesek, *Koloniale Herrschaft*, pp. 190–265.

⁸⁵ UAT. 407/2,1. p. 193. Cf. Hennig, *Am Tendaguru*, pp. 34.

⁸⁶ UAT. 407/2,1. pp. 54, 60–61, 68, 87, cf. 21, 54, 60–61, 67, 78, 93. Cf. citation above. Cf. Pesek, Michael. 'Passage to Africa. Steamship travels of Germans to East Africa in early 20th century'. *Academia.edu*. Web. <https://uni-hamburg.academia.edu/MichaelPesek> (15 April 2020), pp. 7–16.

tinct residential areas for each 'tribe' accordingly. The German palaeontologists' residential policies implemented in the Tendaguru camp can thus be regarded as an expression of a colonial topography that attempted to establish a racially segregated living environment and to resemble and establish a racist colonial order. The only difference between major colonial cities like Dar es Salaam and the camp at the Tendaguru was a matter of scale. Yet, Hennig's and Janensch's residential colonial order did not concord with East African realities but rather with a colonial ideal and was therefore predominantly a phantasy of the two German palaeontologists. As the 'tribes' in the *Lindi* district had had many interrelationships of history and culture, separating them artificially in the Tendaguru camp was an act of tribalisation, typical for any European power trying to establish and secure its colonial rule.⁸⁷

For Janensch and Hennig themselves, work and life at the Tendaguru might have resembled that of a colonial city upon a hill. This 'city' was characterised by challenging yet incredibly satisfying and fascinating palaeontological tasks for the two scientists. Besides their palaeontological work, their camp life at the Tendaguru offered the typical enjoyments of Germans in the East African colony such as hunting, travelling, good food and drink, and marvellous views from their privileged residence at the top of the Tendaguru hill. Just like Clement Gillman's construction camp at the *Central Railway* and Kaundinya's cotton plantation, Janensch and Hennig's living and working environment at the Tendaguru reflected German colonial command. Yet, with Hennig clearly valuing the skill and ability of his overseers, preparators and simple workers, and with even himself describing German colonialism as 'oppression', the colonial order prevalent at the Tendaguru appears on its face to have been comparatively benevolent compared to many other colonial contexts of labour. In fact, despite their skill and ability as well as Janensch's and Hennig's appreciation for it, all East Africans working at the Tendaguru were nevertheless exposed to several despotisms of German colonial rule in East Africa, as a closer look at the labour relationships at the Tendaguru reveal. Yet, the Tendaguru's colonial command was never comprehensive and left many niches for agency, which were not only found but also created by the East African overseers, preparators and ordinary workers at Tendaguru themselves. This also holds true for Hennig's and Janensch's personal servants. Contrary to the imagined European segregated sphere

⁸⁷ Cf. UAT. 407/2,2, p. 500. Cf. Aas. *Koloniale Entwicklung*, pp. 88–94. Cf. Eckert, Andreas. *Kolonialismus*. Frankfurt o.M.: 2006, pp. 66–70. Cf. Singh, Gajendra. 'Finding those men with 'GUTS'. The Ascription and Re-ascription of Martial Identities in India after the Uprising'. *Mutiny at the Margins. New Perspectives on the Indian Uprising of 1857. Volume 4. Military Aspects of the Indian Uprising*. 113–134. Eds. Gevin Rand and Crispin Bates. New Delhi: 2013. Cf. Maier. *African Dinosaurs*, pp. 53–54.

of the Tendaguru's colonial topography, its African *boys* and cooks were integral to the 'colonial city upon a hill'.

5.5.2 *Boys'* Two Men: Personal Servants at the Heart of the Tendaguru

The segregation of Europeans and Africans at the Tendaguru was never complete. Despite their separated allotments, the entire workforce of the Tendaguru interacted regularly in the camp near the excavation sites, just like at the labour camps at the *Central Railway* or at the *Otto* plantation. Exchange between all of the workers happened not only during daily work, but also in the evenings at *ngomas*. At such events, respectable Tendaguru preparators joined the crowd of simpler workers in their dances regularly.⁸⁸ Moreover, the self-declared 'absolute rulers' of the Tendaguru were never alone in their 'castle'. As demonstrated above, Hennig and Janensch were largely dependent on their overseers and preparators, and therefore had to cooperate with them constantly in any task related to the excavation process.

Apart from interacting with the leading excavating personnel, the German palaeontologists' 'royal household' required the constant presence of personal servants ('*boys*') and chefs. As both *boys* and chefs were generally integral to the functioning of any colonial society, the Tendaguru was no exception, of course. Although the figure of the *boy* as domestic and personal servant flares up frequently in sources and narrations written by European colonialists, historiography has not yet examined their role comprehensively.⁸⁹ In fact, Janensch's and Hennig's *boys* were integral for the functioning of the 'European sphere' of the Tendaguru as the entire excavation would have been impossible without meeting the demands of the palaeontologists' households. Having anticipated a meagre

⁸⁸ Cf. UAT. 407/80, pp. 28–29.

⁸⁹ There are only some passages in research about the *boys'* role in colonial history, e.g. Cf. Lindner. *Koloniale Begegnungen. Deutschland und Großbritannien als Imperialmächte in Afrika 1880–1914*. Frankfurt o.M. and New York: 2011, pp. 385, 394. Cf. Söldenwagner. *Spaces*, pp. 180–185. Cf. Gräbel, Carsten. *Die Erforschung der Kolonien. Expeditionen und koloniale Wissenskultur deutscher Geographen, 1884–1919*. Bielefeld: 2015, pp. 128–133, 143–145, 153–154, 163, 166, 181, 189, 207, 271, 285. Cf. Natermann. *Persuing Whiteness*, pp. 84–85, 98. For *boys* in the context of the colonial military cf. Michels, Stefanie. *Schwarze deutsche Kolonialsoldaten*, pp. 115, 199, 212, 224. For a very brief general overview cf. Aitken. 'Forgotten Histories', pp. 139–150. There are furthermore various pieces of African literature dealing with the figure of the *boy*: cf. Oyono, Ferdinand. *House-boy*. Oxford: 1990. Cf. Saro-Wiwa, Ken. *Sozaboy*. Munich: 1997. For a rather European novelistic perspective, cf. Lessing, Doris. *Afrikanische Tragödie*. Frankfurt o.M.: 1989. For the general role of African agency as interpreters, clerks and other intermediaries cf. Klein. 'African Participation',

standard of living in German East Africa before arriving in the colony, right after his arrival at the Tendaguru in April 1909, Hennig was more than satisfied with his formidable provisions. He wrote to his mother:

If I myself had expected to have to do without some things, I have now gained the impression that I will come home very spoiled in every respect: the many black waiters, who only need a hint or infinitive to provide me with every comfort and who constantly [. . .] perform work without any special order, are already indispensable to me. Also the food and drink is not only here in the base, but was already on the march a worthy continuation of life on board. [. . .] All this is so quiet, fast and without supervision that I feel like a Prince Charming.⁹⁰

But not only was this beginning a positive surprise for Hennig: the supplies allocated and treatment given to all Europeans residing at the Tendaguru remained splendid throughout the entire expedition process. By contrast, Hennig and Janensch had some difficulties purchasing food supplies for their workers, especially in the beginnings of the third dry season in 1911, resulting from the meagre precipitation during the preceding *masika*.⁹¹ In charge of serving the European palaeontologists at the Tendaguru were Janensch's and Hennig's personal servants – their so-called *boys* – named Ali, Wilhelm and Sefu, as well as their two chefs, whose names are not conveyed in the sources. The fact that the chefs' names are not conveyed points to a historiographical blank space: only very few works have investigated the role of personal servants such as *boys* or chefs in European colonies.

Robbie Aitken, whose minor article is the most comprehensive study on personal servants in imperial Germany, elucidates some general trends about *boys* serving in the German colonies. He observes first that the vast majority of all the colonialists' servants were male and that the personal servants' status in the colonial hierarchy was comparatively high: In general, they established and maintained a close relationship to their European employers and often served as interpreters or cultural brokers, who introduced European newcomers to the colonial society. Similar to the Tendaguru's preparators and overseers, most of the *boys* in German East Africa originated from the coastal Swahili-Arab elite. In addition, especially in the beginning of German colonial rule in the 1890s, many had often been slaves, formerly owned by an Arab or a Swahili plantation owner or trader. In comparison to plantation or railway workers, the *boys'* work was physically less demanding,

pp. 273–288. Except for Lindner's, Söldenwagner's, Natermann's and Klein's work, I owe these references to Yagmur Karakis and especially Stefanie Michels.

⁹⁰ UAT. 407/2,1, pp. 99–100.

⁹¹ Cf. Maier. *African Dinosaurs*, pp. 75–77. Cf. Hennig. *Am Tendaguru*, pp. 42–43. Cf. MfN. HBSB. 5.1, pp. 131–134.

whereas their wages were relatively high. With a German industrial worker making ca. twenty-five Marks a week in 1913, a personal servant in German East Africa could make up to the equivalent of ca. five Marks a week (ca. four Rupees). A *boy* was certainly not as well paid as an *Askari* or an African cook but was many times better off than an ordinary dinosaur fossil excavator employed at the Tendaguru. Moreover, many personal servants were internationally experienced, as travelling with their European employers was simply part of their job. Their occupation often brought them not only to various other colonies, but also to European countries such as the German *Reich*. As privileged as these benefits might make them appear initially, being a personal servant of a coloniser also included several disadvantages. Although the terminology of *boy* generally reflects that they were often recruited around the very young age of sixteen, it also reveals that the colonisers intended to assign their personal servants an inferior societal status despite their relatively high economic benefits. By calling their closest employees, *boys*, Europeans living in colonial Africa expressed a feeling of paternalist superiority that included the idea of educating or rather 'civilising' their personal servants constantly. Apart from this humiliation induced by the colonisers, most African societies regarded domestic service as female labour. Being a coloniser's *boy* could therefore threaten the masculine identity of a personal servant not only in the eyes of the Europeans, but also in the view of African societies. The realities of the colonial society thus relativised the *boys'* higher societal status gained through high payment and proximity to the highest circles of a colonial society. Analysing the European settler societies in German East Africa that included *boys*, Philippa Söldenwagner is thus convinced that both the occupation as a *boy* and as a cook bore a very ambivalent character: On the one hand, experienced and competent *boys* were indeed valued for their service by their employer, often resulting in years-long employment relationship and sometimes even resulting in a relationship with a high degree of mutual trust. On the other hand, working closely with a European colonialist always entailed the danger of brutal corporal punishment and abuse for any failure or misbehaviour, no matter if 'justified' or not. Due to their centrality in a European colonial household and their intimate knowledge of their 'master's' lives, personal servants furthermore often experienced not only trust, but also mistrust from their employers. Any well-intended gesture in a *boy's* daily service could be interpreted as a cheeky attempt by the personal servant to be granted benefits such as extra pay or vacations. In German East Africa, many Europeans even feared that their personal servants might poison them, either as an act of revenge or for any other irrational reason. As a result, personal servants in German East Africa had to fear

the possibility of their employer's pre-emptive strikes at any time, making their employment a precarious existence indeed.⁹²

Many of these aspects of the relationship between *boys* and their European employers also apply to Janensch's and Hennig's relationship to their *boys* in service at the Tendaguru. Given the source material, which was primarily produced by Edwin Hennig, there is an imbalance in the available information about the German palaeontologists' *boys*, with it focussing on Hennig's personal servants. In any case, an analysis of Hennig's employment relationship to his *boys* alone already contributes to a better understanding of the phenomenon of labour at the Tendaguru that goes not only beyond types of manual tasks of excavations performed by the simple workers, but also beyond the skilled work of experienced overseers and fossil preparators at the Tendaguru. The tasks of the *boys* and cooks were fundamental indeed, as employing personal servants was one of the immediate priorities for Hennig when arriving in German East Africa: "[two] boys and one cook [were] the usual minimum for [one] European" in the colony, because there was "enough to do all day" in a German colonial household. Whereas the cook's task centred on food preparation such as purchasing ingredients, keeping the kitchen and its firing material ready, and the actual preparation of food, Hennig regarded his *boys* as "maid for everything".⁹³ The occupation of his two *boys* named Ali and Sefu was to be at Hennig's service at any time for a great variety of tasks. These ranged from serving the food, acting as a waiter during meals, sewing, laundry, housekeeping, and packing as well as unpacking all the luggage necessary for any *safari*. Moreover, Hennig's *boys* accompanied him on all his travels around the Tendaguru and German East Africa. Furthermore, they were his regular guides who assisted Hennig in one of his favourite pastimes in German East Africa: The (big) game hunt.⁹⁴

Particularly during his first months in German East Africa, Hennig's *boy* Ali was also of incalculable benefit as a personal Swahili teacher and cultural broker

92 Aitken states much higher wages for personal servants, namely 19 Marks per week, i.e. ca. 100 Rupees per month. This is in stark contrast to the numbers provided by Söldenwagner, who reports of 15 Rupees per month. Gillman, providing for a list of items purchased in Dar es Salaam in 1905, confirms the number of 15 Rupees a month for one personal servant. I thus deem 15 Rupees/month as correct. Cf. Gillman Diaries. Mss. Afr. S. 1175/1,2_1_no. 8, pp. 61–62. Cf. Söldenwagner. *Spaces*, pp. 180–185. Cf. Aitken. 'Forgotten Histories', pp. 139–150. Cf. Gunn. *Outsourcing*, pp. 7–9. Discussing the role of women who face competition from male domestic workers cf. Coquery. *African Women*, pp. 113–115. On domestic labour in (colonial) Africa cf. Bryceson. 'Domestic Work', pp. 301–332.

93 UAT. 407/2,2, p. 406. UAT. 407/2,1, p. 199, cf., pp. 82, 93, 99–102. Cf. Paasche. "Der Aufstand", p. 57.

94 Cf. Hennig. *Am Tendaguru*, pp. 60–72.

in various ways.⁹⁵ As Hennig had received the offer to become part of the Tendaguru Expedition at a very short notice, the preparations for his journey and stay were hasty. Thus, Hennig's Swahili language acquisition started during his journey to East Africa on board the steamer taking him to the German colony. On this voyage, Hennig received his first Swahili language instructions from one of the East African dragomans employed at Berlin's *Seminar für Orientalische Sprachen* ('Seminar for Oriental Languages'),⁹⁶ who happened to be returning to his home on the same ship as Hennig. Of course, these Swahili classes continued in Dar es Salaam as soon as Ali (cf. Figure 8) had become Hennig's boy, thus enabling Hennig to orient himself quickly in German East Africa, right after his arrival to the German colony. Apart from this, Ali was generally an indispensable source of knowledge for Hennig, as the German had never set foot on the African continent or any other (German) colony before. Undoubtedly, Hennig valued the experience of his personal servant:

Anyway, my Ali will be a good guide for me, who knows not only literally all German East Africa, but also a good part of the English colonies and has been gliding around on the small cruiser 'Bussard' for [two] years, so that even Seychelles, Madagascar or Cape Town would be nothing new to him.⁹⁷

⁹⁵ Cf. Connell-Szasz, Margaret (Ed.). *Between Indian and White Worlds. The Cultural Broker*. Oklahoma: 2001. Cf. Klein. 'African Participation', pp. 273–288. Cf. Lawrence et al. (Eds.). *Intermediaries, Interpreters, and Clerks*.

⁹⁶ The *Seminar für Orientalische Sprachen* was the most important institute in Germany, delivering classes in foreign languages spoken in the German colonies to future colonial officials. Swahili was one of the most prominent languages taught at this institution. The employment of East Africans at the Institute in Berlin was a common occurrence, as were their travels between Germany and East Africa. Cf. Rösser, Michael. 'Nachricht von Gott? Das Gratulationstelegramm von Selim bin Abakari an Hermann von Wißmann Anlässlich seiner Hochzeit am 20.11.1894'. (*Dis-)Locating Hermann von Wissmann*. 16–25. Ed. Stefanie Michels. Düsseldorf: 2018, pp. 22–25. Cf. Bromber, Katrin. 'German Colonial Administrators, Swahili Lecturers and the Promotion of Swahili at the Seminar for Orientalische Sprachen in Berlin'. 39–54. *Sudanic Africa*, vol. 15. Sudanic Africa (2004). Web. *Jstor*. https://www.jstor.org/stable/25653412?Search=yes&resultItemClick=true&searchText=bromber&searchText=katrin&searchText=orientalische&searchUri=%2Faction%2FdoBasicSearch%3FQuery%3Dbromber%2Bkatrin%2Borientalische%26amp%3Bacc%3Doff%26amp%3Bwc%3Don%26amp%3Bfc%3Doff%26amp%3Bgroup%3Dnone&ab_segments=0%2Fbasic_SYC5152%2Fcontrol&refreqid=search%3A42e2cef246d239906a9a270efa599fdc&seq=1 (21 April 2020). Cf. Pugach, Sarah. *Africa in Translation. A History of Colonial Linguistics in Germany and Beyond, 1814–1945*. Ann Arbor: 2015, pp. 66–70, 149–150.

⁹⁷ UAT. 407/2,1, p. 199, cf. p. 14. Cf. Maier. *African Dinosaurs*, p. 23.



Figure 8: “Ali”.

Source: UAT. 407/91. Nachlass Hennig (1882–1977)
Fotoalbum.

Unfortunately, Hennig does not give any details about Ali’s occupation, neither regarding his work in the English colonies nor on the German steamer *Bussard*. It is therefore not clear whether Ali was occupied in menial tasks on board a steamer that was central to the global transport system of the nineteenth century,⁹⁸ or whether he had already been employed as a *boy* serving a European person on board the ship. Yet, as each *boy* had to keep a book of references listing the assessments of all European employers, it appears likely that Ali had already been working as a *boy* for a long time before coming to the Tendaguru. At least, Hennig refers to such a book of references in his self-narratives. It is thus very likely that Ali had worked as a *boy* either in British colonies or on the *Bussard* or both before meeting Hennig in Dar es Salaam in April 1909. Remarkably, with Ali’s previous employment on the *Bussard*, the *boy* must have known many more German colonies than Edwin Hennig would ever visit in his entire life. It is very likely that Ali had established precious networks within European and especially German colonial circles on board the *Bussard* before coming to the Tendaguru

⁹⁸ Cf. Cole and Hart. ‘Trade, Transport and Services’, pp. 279–282. Cf. Gunn. *Outsourcing*, pp. 12, 30–31.

Expedition, where he became fundamental in enabling Edwin Hennig's palaeontological work.

In any case, the information about Ali's previous employers contained in Hennig's self-narratives seems to be correct, as a closer look at the history of the steamer *Bussard* reveals. Built in 1890 and taken out of action in late 1912, the *SMS Bussard* was one of the very few German military steamers that saw action in many colonial battles during the heyday of German colonialism: Stationed in East Asia initially, she had her first military operations in New Guinea (*Kaiser-Wilhelms-Land*) to put down an uprising of the local population in 1892. One year later, she went on to Samoa for similar reasons before she proceeded to northern China, carrying German reinforcements to support the international troops putting down the Yihetuan Movement (the so-called 'Boxer War') between 1899 and 1901. When the Maji Maji War seriously challenged the German colonial rule in East Africa between 1905 and 1908, it was again the *Bussard* that reinforced the German colonial forces with marines. On her way from East Asia to German East Africa, the *SMS Bussard* left the German colony Tsingtau (China) in April 1904, passed by Hong Kong, Sabang (Indonesia) and Colombo, as well as Mahé (Seychelles), and was stationed ashore Dar es Salaam from June 1904 onwards.⁹⁹ As the *Bussard's* route resembles Ali's CV as reported by Edwin Hennig in April 1909, there can be no doubt about Ali's qualifications as a *boy* in the environment of the 'colonial globality' around 1900. Seen through the coloniser's eyes, Ali had certainly been judged as reliable because East Africans appearing dubious to German colonial officials would have certainly never had the chance to board one of the most significant military vessels crossing the oceans from one German colony to another. Moreover, it was the well-connected and highly experienced Bernhard Sattler who conveyed the *boys* Ali and Sefu as well as the East African cooks to the German palaeontologists, Hennig and Janensch. This further supports the argument that, with Ali as his *boy*, Hennig had employed not only a very experienced but also a highly skilled man as his personal servant at the Tendaguru excavations.¹⁰⁰ It is therefore not very surprising that Hennig indeed highly val-

99 Cf. Buchholz, Bernhard. 'Erlebnisse des Maschinisten Otto Gehring von SMS "Bussard" während des Maji-Maji-Aufstandes in Deutsch-Ostafrika'. N.p. Ed. *Traditionsverband ehemaliger Schutz- und Überseetruppen. Freunde der früheren deutschen Schutzgebiete e.V.* Web. http://www.traditionsverband.de/download/pdf/bussard_buchholz.pdf (21 April 2020). Cf. Paasche. "Der Aufstand", pp. 48–50. Cf. Fellmann, Ulrich (Ed.). *Von Schwaben in den Bismarckarchipel. Tagebücher der Missionsfrau Johanna Fellmann aus Deutsch-Neuguinea 1896–1903*. Wiesbaden: 2009, pp. 119–129. Cf. Rösser. "Den Seegedanken zu pflegen?"

100 Cf. UAT. 407/2,1, pp. 82, 93, 96, 108. Cf. Maier. *African Dinosaurs*, p. 23.

ued his *boys'* experience and skills and described both Sefu and particularly Ali as 'clever' and 'capable' employees.¹⁰¹

Yet, little details could trigger conflicts between Hennig and his *boys* and the German palaeontologist certainly solved them in a colonial manner. After ca. six months in service, Hennig dismissed Sefu in October 1909 because the *boy* had committed "all kinds of small, but daily incapacities and sins of omission", and hired a young Mgoni named Wilhelm, who had been educated by a French mission, who remained in Hennig's service until the very end of the palaeontologist's stay at the Tendaguru.¹⁰² Tangible conflicts also arose between the allegedly 'irreplaceable' Ali and Hennig for minor infringements as well. On one occasion in March 1911, Hennig "boxed" Ali "on the ear" for his "idling", resulting in the *boy's* passive resistance being provoked by Hennig's violence. Hennig thus turned furious and hurried to sentence Ali for his refusal to work as soon as possible. Subsequently, he "spread out [ten] strokes [. . .] in the camp" to publicly punish this "offence against" the German palaeontologist. As Sattler, Hennig's role model for treating African employees, had dealt out twenty-five strokes even for minor offences, Hennig believed his punishment to be comparatively mild. Even more so, as Hennig had initially planned to deal out fifteen instead of ten strokes but responded to Ali's pleadings and "had [also] let [the *boy*] keep his pants on"¹⁰³ during the public corporal punishment. Although Ali declared subsequently his wish to leave his employment for good because of Hennig's abuse, the *boy* apparently remained in Hennig's service until the end of the Tendaguru Expedition. Unfortunately, there are no further details available that could shed more light on the employment relationship between Ali and Hennig in the sources under investigation.¹⁰⁴

Besides illustrating general abuse against East African employees, Ali's conflict with Hennig also reveals means of resistance to colonial command at the Tendaguru. Although the *boy* would ultimately remain at the palaeontological excavation site, Ali's case shows his options for resisting colonial orders. These ranged from refusal to work to the open threat of desertion. Furthermore, Ali was indeed able to reduce Hennig's sentence by verbal opposition, which also later caused Hennig to reassess his severity of punishment, stating in his diary that he "would like to punish less"¹⁰⁵ in the evening after the castigation. Not only did Ali's volition influence Hennig's intentions, but also the much younger Wilhelm appears to have expressed his own desires, repeatedly. For example, Wil-

¹⁰¹ UAT. 407/2,1, p. 34.

¹⁰² UAT. 407/2,1, pp. 88, 198. Cf. UAT. 407/2,2, pp. 341, 380. Cf. Maier. *African Dinosaurs*, pp. 254.

¹⁰³ UAT. 407/81, p. 118.

¹⁰⁴ Cf. UAT. 407/81, pp. 118–119.

¹⁰⁵ UAT. 407/81, p. 118.

helm wished to see Dar es Salaam and the coast, which led to Hennig even pondering whether he could take his personal servant to Germany one day: a plan not uncommon in German colonial history as many colonisers took their personal servants to the German *Reich*, especially in the first half of the formal German colonial rule in Africa. Yet the plan to take Wilhelm to Germany never materialised,¹⁰⁶ and for Wilhelm's case, there is hardly any more information to be found in the consulted sources.¹⁰⁷

Even less information is provided about the palaeontologist's cooks. Their role is rarely made explicit in Hennig's self-narratives. Yet, Hennig's documents reveal that becoming the personal servant of a German in colonial East Africa as a chef was not necessarily a popular option, even though it offered a comparatively high salary. Having fired one of his first cooks and trying to employ a new one, Hennig initially

wanted to have a coast boy to help the [remaining other] cook and train himself thereby as a chef. Of course, there was nobody [t]here and only one of [the] youngest people agreed to take this risk. The recruitment went something like this (shortened): "Can you cook?" "No." "But you will learn?" "No." "Well, you'll try, won't you?" "Yes." "Then you will learn." "No." "Don't you have any brains at all?" "Hapana kabisa mimi ni muera [-] not in the least, I am a Muera!" We [accepted him anyway], because that kind of self-awareness was a sure-fire sign to get better. But he was right after all [. . .] because [he didn't get anywhere]. [. . .] By the way, that modest [']Civis Romanus Sum['] of the Muera is often heard, it's touching!¹⁰⁸

Apart from the obvious fact that the potential cook was very reluctant to become Hennig's personal servant, there are several conclusions to be drawn from this incident. Besides the Mwera's constant verbal opposition to his recruitment as a cook for Hennig, it points to other strategies of resistance to colonial command at the Tendaguru and in German East Africa in general. First of all, it shows the general tendency of many colonial populations to opt for passive resistance as soon as active or open resistance failed to show any results. Regarding the district of *Lindi*, especially the Mwera people were extremely successful in pursuing this strategy. Given their loosely organised societal structure, the German colonial administration had never been able to gain influence over one powerful Mwera chief, who would have been able to control his people for the German colonists' sake. Although maintaining a complex network with both fellow Mwera dwellings and other societies, most of the Mwera lived in autonomously ruled villages, numbering a few huts only. Hence, as soon as the colonial administration sought to

¹⁰⁶ Cf. UAT. 407/2,1, pp. 265–266. Cf. UAT. 407/2,2, p. 380.

¹⁰⁷ There are few photographs that show a very young man named "Wilhelm" Cf. UAT. 407/91, "Wilhelm".

¹⁰⁸ UAT. 407/2,1, p. 198.

win power over any Mwera community, it was very easy for such a village to leave their very settlement for good and start another in an area less accessible to the colonisers. As masters of passive resistance, the Mwera soon acquired the reputation of a ‘reluctant’, ‘incapable’, and ‘lazy’ people in the colonial discourse; a discourse that was also endorsed by Hennig, who judged the Mwera to be not as clever as other people living in German East Africa.¹⁰⁹ As the Mwera cook was well aware of this colonial discourse and as he apparently did not want to become Hennig’s chef at all, he drew on this very colonial discourse to fend off the disliked employment at the Tendaguru. The further he resisted the disliked employment by pretending that any Mwera was unsuited to become a cook and continued his refusal by not working properly during the actual employment, the closer this Mwera succeeded in re-establishing his freedom as a man without any closer contact to the German coloniser.

Apart from illustrating the successful means of resistance against becoming a personal servant in colonial East Africa, the excerpt from Hennig’s self-narrative quoted above points to another aspect of German colonial rule in East Africa. Especially its jocular tone illustrates that the use of humour may reveal certain tacit colonial realities. Jokes and humour in historical sources of colonialism often express scenes of absurdity that reveal “moments of violence and misunderstandings” in the colonial encounter. According to Michael Pesek, such moments of absurdity in colonial encounters were a substitute for speechlessness, which resulted from insecurities of colonial rule. Accordingly, both the coloniser and the colonised experienced the realities of colonial rule in a state of crisis. In such a crisis, old established patterns of behaviour would not apply to enable the pair to reach any mutual understanding. The colonised experienced this crisis frequently as a colonial rule characterised by sudden, unjustified, or irrational outbreaks of violence on the part of the coloniser: Like in Ali’s case illustrated above, minor mistakes could result in numerous *kiboko* strokes.¹¹⁰ Seen in this light, the young *Mwera*’s strategy – using racist colonial stereotypes to ward off potential corporal punishment for his reluctance to become Hennig’s cook – was successful indeed. In this scene, absurdity marked by humour was the right strategy to prevent colonial abuse by “creating connections without creating common ground.”¹¹¹

109 Cf. Aas. *Koloniale Entwicklung*, pp. 29–31, 88–96, 147–155. Cf. Maier. *African Dinosaurs*, pp. 53–54. Cf. Hennig. *Am Tendaguru*, pp. 107–116.

110 Cf. Pesek, Michael. ‘Die Absurdität kolonialer Repräsentationswelten. Humor und Gewalt in Deutsch-Ostafrika, 1889–1918’. 1–13. *Academia.edu*. Web. https://www.academia.edu/3648430/Die_Absurdit%C3%A4t_kolonialer_Repr%C3%A4sentationswelten_Humor_und_Gewalt_in_Deutsch-Ostafrika_1889-1918 (23 April 2020), pp. 1–8.

111 Pesek. ‘Die Absurdität’, p. 8.

5.6 Labour, Command and the Daily Life of the Workers

5.6.1 Female Labour

It was not only the preparators, overseers, and Hennig's and Janesch's personal servants who made the Tendaguru Expedition one of the most successful palaeontological excavations in the world around 1900. Without up to 500 other East Africans working and living with their families at the Tendaguru camp, the whole endeavour would have been doomed to failure. In an analogy to the decisive roles of the overseers and preparators, the importance of the ordinary workers is also illustrated by the interim names given to some dinosaur fossil skeletons found at the Tendaguru. Take the skeleton of the *Wagonisaurus* as an example: The *Wagonisaurus* describes a dinosaur skeleton found just north of the Tendaguru camp on 6 September 1909. It bore the expedition's largest and heaviest cervical vertebra, but it was in a very bad state of conservation and finally had to be left behind in the East African soil. It was named after the Wangoni, who were popular workers, not only among planters in the *Lindi* district but also at the *Central Railway*. Their skill and character were also greatly appreciated by Hennig and Janensch and they were one of the three largest groups of workers at the Tendaguru. Interimly naming one of the largest skeletons found at the Tendaguru after an East African group of workers illustrates two major aspects: First of all, it shows the German palaeontologists' respect towards the Wangoni's work performance in general.¹¹² As far as the sources can tell, a party of Wangoni not only discovered the skeleton, but also exposed it subsequently, as Hennig noted on Sunday, 19 September 1909: "Together with Janensch we visit the mighty skeleton, which has been well worked out by the Wangonis. So far it has [ten] trunk vertebrae with outrageous ribs and [four] very adventurous and valuable cervical vertebrae."¹¹³ Besides Hennig's and Janensch's respect towards their Wangoni workers, the epithet *Wagonisaurus* reveals secondly that the individual role of many other workers at the Tendaguru is not made explicit in the sources. This holds not only true for the many individual Wangoni workers but also for many other East Africans present at the Tendaguru: women in particular.

Besides the Wangoni, there were also Wayao, Wamuera, Wadonde and Wamakwa, working and living at the Tendaguru. With the sources reporting a maximum of 500 workers, it must be stressed that the wives and families of most of the

¹¹² Cf. UAT. 407/80, pp. 28, 89–90. Cf. UAT. 407/81, pp. 11, 87, 135. Cf. Ohl and Stoecker. 'Taxonomie', p. 237.

¹¹³ UAT. 407/80, p. 68.

male workers accompanied their husbands to the palaeontological excavations. This leads to an overall number of almost 800–900 people living in the camps at the Tendaguru. That implies that more than one-third of the people present at the camp were either children or women, making them a substantial part of the entire endeavour. Yet, it is difficult to assess the role of women and children regarding labour at the Tendaguru as they appear only scarcely in both Edwin Hennig's diary and in the files held in Berlin's Museum of Natural History. Yet, these sources suggest that just as Hennig and Janensch relied on their *boys* and cooks to maintain their households, the work capacities of the Tendaguru's male workers largely depended on the work of their wives and the other women present at the palaeontological excavation site. Although general research about female labour in (East) Africa has shown that women's work was not necessarily limited to the domestic sphere, but also included, for example, being a *chief*, a railway or road construction worker, as well as being a (petty-) trader,¹¹⁴ the sources consulted for the Tendaguru suggest that the women and children were primarily occupied with tasks generally referred to as 'reproductive labour'. 'Reproductive labour' means that the work of the women sustained the working capabilities of their men by arranging anything necessary to enable the male's absence from home and his presence at work. It included predominantly childcare, food preparation and the collection of firewood. Of course, meals were generally eaten together in the camp in the evening after work but often, women or children delivered meals to the excavation ditches during work: This enabled the male workers to have their food during shorter breaks and prevented them from leaving the actual workplace to eat. Apart from the preparation and delivery of food for members of their own households, women at the Tendaguru also had other tasks fundamental to the overall expedition: The major task of women and children at the Tendaguru was to ensure sufficient water supply (cf. Figure 9). Water was crucial for the entire expedition in general, but especially because wells were scarce around the Tendaguru hill. Despite the problem of discovering water sources as such, most of the wells were not

114 Cf. Coquery. *African Women*, pp. 9–20, 32–33, 34–44. For the role of women at the Central railway in German East Africa cf. Chapter 3. Cf. Koponen. *People and Production*, pp. 268–333. For the role of women during WWI in German East Africa cf. Vokalavene, Yovita. *The Role of African Women in the First World War (1914–1918) in German East Africa*. Dissertation project at the University of Göttingen. Web. <https://www.uni-goettingen.de/en/promotionen/561451.html> (28 April 2020). For the history of women in southwest Tanzania, where also the Wangoni workers came from cf. Kinunda, Nives. *Negotiating Women's Labour: Women Farmers, State, and Society in the Southern Highlands of Tanzania, 1885–2000*. Unpublished Dissertation submitted at the University of Göttingen: August 2017. Web. <https://ediss.uni-goettingen.de/bitstream/handle/11858/00-1735-0000-002E-E57A-9/Nives%20PhD2.pdf?sequence=1> (28 April 2020), pp. 112–115, 175–178, 278–286.

rich and some dried up during the dry season. In this case, women and children had to walk up to an hour to fill their vessels with the precious commodity before they could return to the camp again, needing another hour to come back. When precipitation was exceptionally low, a few trips a day to the wells were not enough. Instead, children and women had to walk day and night to the sources to haul water in order to guarantee the Tendaguru Expedition's constant water supply. Not only human beings were affected by the water scarcity, but wild animals also often frequented the few watering places and posed a threat to the water deliverers. On one occasion, a female water carrier was (almost) attacked by a lion when on her way to the water source, further illustrating the difficulties of maintaining a decent water supply to the Tendaguru and thus, the importance of female labour there.¹¹⁵

It seems that there were no women involved in any excavation work at the Tendaguru. This contrasts with the situations at the *Central Railway*, where women also performed several menial tasks of railroad construction and at the *Otto* plantation, where women were also part of the 'living machine'. Moreover, the archival sources do not report of any women working as sex workers or beer brewers at the Tendaguru Expedition, whereas there are reports of women working in these roles at the construction sites of the *Central Railway* and at *Otto's* plantation in Kilossa. Yet, as *pombe* (locally brewed beer) was central to *ngomas* (feasts), which also occurred at the Tendaguru camp, it is very likely that women were involved in the production and sale of alcoholic beverages at the Tendaguru as well.¹¹⁶ Hence, female work seems to have been (largely) exempt of any wage labour at the palaeontological excavation site at the Tendaguru. This is, of course, in stark contrast to male labour, which was characterised by relatively constant wage payments and comparatively regular working hours.

5.6.2 Male Workers at the Tendaguru: The Popularity of Excavation Works

In contrast to the women at the Tendaguru, male workers were almost exclusively occupied with tasks either directly related to palaeontological excavation work or the subsequent transportation of the fossils to Lindi. They either dug for bones in the soil, or packed the fossils ready for transport, or carried them to the

¹¹⁵ Cf. Maier. *African Dinosaurs*, pp. 32, 38, 63, 79. Cf. Hennig. *Am Tendaguru*, pp. 37–39, 43, 61–62, 66–68, 111, 116, 127, 144. Cf. UAT. 407/80, pp. 10, 12, 51. Cf. UAT. 407/81, p. 35. Cf. UAT. 407/82, p. 30. Cf. UAT. 407/2,2, pp. 359–361, 369, 380, 408, 422, 496. Cf. MfN. HBSB. 10.4, pp. 133–134. There are also a few visual sources displaying female water carriers. Cf. UAT. 407/91, "Wasserholerinnen". Cf. MfN. HBSB. (1694), (421), (193), "Frauen mit Wassertöpfen".

¹¹⁶ Cf. UAT. 407/80, pp. 28–29. Cf. UAT. 407/2,2, pp. 389–390. Cf. UAT. 407/2,1, p. 87.



Figure 9: Female water carriers.

Source: UAT. 407/91.

coast for shipment to Europe. What regulated the labour of these men most was nature: For any working task, the most intense activity took place in the dry season, whereas activity regressed to a minimum in the rainy season. During *masika*, only the most important tasks like conservation and general surveillance of the area under excavation were carried out. This seasonal fluctuation was also reflected in the number of male workers employed at the Tendaguru Expedition in the year 1909: “Sixty local men had been engaged by April 23. [. . .] This grew to 70 and 80 in the [following] two months. [. . .] At the height of the season [in July], the Expedition employed 420 men. The number fell to 230 in November, to 200 at

the start of December and to 170 in the course of [the same] month.”¹¹⁷ Ultimately, there remained only a few dozen people under superintendent Boheti when Hennig and Janensch were absent for several weeks between New Year and the end of April 1910, during *masika*. The maximum number of 500 male workers was only reached in the third year, when the entire area in which excavations were carried out spanned over ca. thirty km². Overall, the numbers given reflect only the general trends of seasonal fluctuations. In fact, the number of workers was neither rising nor falling constantly, but the number of workers employed fluctuated frequently. These minor swings were the result of various reasons: Sometimes, workers wanted to leave the Tendaguru to farm the fields in their home villages or had other reasons for requesting holidays. Occasionally, Janensch and Hennig also fired workers for varying reasons, mostly related to alleged lack of work discipline. Sometimes, the German palaeontologists were not sure if there were enough funds left in Berlin to pay a larger workforce, and thus refrained from hiring any new ones. This was especially the case in the third and final excavation season in 1911, when Hennig and Janensch refrained from (re-)hiring workers as they feared insufficient monetary supplies.¹¹⁸

In any case, it must be stressed that most of the funds collected for the Tendaguru Expedition were spent on the workers' wages. In total

the expedition [. . .] spent 183,607.45 marks [between 1909 and 1911], of which 127,325.70 had been donated by private individuals. [. . .] Wages for the indispensable Africans, though cheap by European standards, amounted to almost 90,000 marks, or almost 50 percent of all the funds received.¹¹⁹

Remarkably, the wages paid at the Tendaguru for simple excavators were not only low, compared to European standards, but also compared to the wages paid at plantations or at the *Central Railway* in German East Africa: Hennig and Janensch themselves received ca. 266 Rupees (ca. 355 Marks) a month, whereas personal servants like their *boys* could make up to ca. fourteen Rupees a month (ca. nineteen Marks). A Tendaguru overseer or preparator received ten to eleven Rupees a month (ca. fifteen Marks), whereas one of Janensch's and Hennig's simple workers received nine Rupees a month only (ca. twelve Marks). In fact, of these nine Rupees, only five Rupees were the actual wage, whereas the other four Rupees were so-called *posho*, the food allowance. The *posho* of four rupees was paid

¹¹⁷ Maier. *African Dinosaurs*, pp. 27, 60.

¹¹⁸ Cf. Maier. *African Dinosaurs*, pp. 54–56. Cf. Hennig. *Am Tendaguru*, pp. 49, 93–94. Cf. MfN. HBSB. 5.1, pp. 18, 25, 40, 55, 60, 64–66, 74, 86–87, 91–93, 104–108, 129, 137, 184, 192, 201–205.

¹¹⁹ Maier. *African Dinosaurs*, p. 84, cf. pp. 49, 81, 84–85. Cf. Stoecker. 'Über Spenden', pp. 87–91. Cf. Hennig. *Am Tendaguru*, p. 8. Cf. MfN. HBSB. 5.1, p. 10.

in installments once a week. That means each worker received one Rupee to buy himself food for his daily meals every seven days.¹²⁰

In fact, these comparatively low wages paid at the Tendaguru were not undisputed, and newly arriving workers attempted to raise them repeatedly. In the first place, the workers' striving to negotiate their working conditions is reflected in the names they had given to themselves such as "work to eat", "mind to talk", "three o'clock", "bad work" or "lion". All of these names indicate either their preference for their working hours, the reason why they actually took up an employment, or their staunch mind to fight for decent wages.¹²¹ Secondly, especially those workers who had migrated to the Tendaguru from faraway places like the 700 km distant Lake Nyassa, "enquired about the salary and sought to raise them every time", before they finally decided to take up work at the palaeontological excavations. Moreover, they "did not want to commit themselves for a certain period of time, but wanted to be sure that the right of both parties to terminate the contract would be safeguarded."¹²² Their insistence on the freedom of their working contracts allowed the workers to leave the Tendaguru either if the working conditions did not please them or if they just wanted to leave the work place, return to their villages or have a rest. Remarkably, the wages paid for workers performing simple tasks at the Tendaguru Expedition were not attractive compared to the wages paid by larger plantations in the *Lindi* district, which were not very far from the Tendaguru. These plantations, which were almost exclusively located along the coast, were only about 100 km away from the Tendaguru, and paid between twelve and thirteen Rupees a month for a male plantation worker between 1900 and 1907. Later, the amount rose slowly between 1907 and 1914.¹²³ Yet, despite this pay-gap between *Lindi's* coastal plantations and the Tendaguru Expedition and the fact that the daily costs of living were somewhat higher along the coast than in the hinterland, it is still striking that this pay-gap was not reflected in the labour supply at the Tendaguru at all. Quite the contrary: Hennig and Janensch witnessed very reliable labour supply during their entire stay in German East Africa.

Whereas East Africans living in the catchment areas of the Moravian Mission tended to leave work that was provided by the missionary stations, immediately as soon as railway construction sites offered better pay (cf. Chapter 3), the work-

¹²⁰ Cf. Hennig. *Am Tendaguru*, p. 41. Cf. UAT. 407/2,1, p. 152. Cf. MfN. HBSB. 10.4, pp. 124–125. Cf. MfN. HBSB. Tendaguru Expedition 6.7. Finanzierung (Löhne und Gehälter). Cf. MfN. HBSB. Tendaguru Expedition 6.2. Finanzierung. Cf. Maier. *African Dinosaurs*, p. 33. Cf. Söldenwagner. *Spaces*, pp. 180–183. Cf. Gillman Diaries. Mss. Afr. S. 1175/1,2_1_no. 8, pp. 61–62.

¹²¹ UAT. 407/2,1, p. 167.

¹²² UAT. 407/2,2, pp. 337–338.

¹²³ Cf. Aas. *Koloniale Entwicklung*, pp. 141–147, 222–226. Cf. Maier. *African Dinosaurs*, p. 33.

ers at the Tendaguru remained at the palaeontological excavations despite the fact that payment remained very low throughout the entire excavation process. Overall, neither the published nor the archival sources report any shortage of labour at the Tendaguru at any time. This is a remarkable fact that scarcely ever occurred at any other colonial endeavour in German East Africa. Normally, any colonial enterprise in German East Africa would complain about labour scarcity every now and then and would consequently request the colonial administration to send the local population to work even by force, if necessary. This was also the case for the district of *Lindi*, where the planters even demanded that pressure be placed on starving people to work during the Maji Maji War, and repeatedly pressured the colonial administration to urge the local populations to work in times of peace (cf. above). By contrast, the German palaeontologists hardly ever experienced such labour scarcity, which would have threatened the Tendaguru Expedition's success. At the beginning of the Tendaguru Expedition, its excellent labour supply was not very surprising. It started in a well-organised manner and with the right people in charge of labour recruitment. The first sixty workers starting at the Tendaguru in April 1909 were initially recruited by Bernhard Sattler, who had known them for a relatively long time. They were not only able-bodied men, but they had also been trained as miners by the prospector Sattler himself and were therefore the perfect people to receive further education as fossil excavators by Hennig and Janensch. With Sattler, and later also *DOAG*'s Besser, sharing the responsibilities with Janensch and Hennig in the first weeks of setting up the Tendaguru Expedition, language barriers between the Germans and the East Africans could therefore be avoided. This helped to establish a work environment that bore the potential of mutual understanding in this first instance. Secondly, with Sattler refraining from exerting excessive violence against his workers, he set the standards for Hennig and Janensch, reminding them that excessive use of force was counterproductive to ever becoming and remaining successful colonial employers. Generally, excesses of violence at any endeavour in German East Africa would ultimately lead to the most widespread means of African resistance to unpopular employments: namely, desertion from the workplace, which often threatened an employer's entire economic existence.¹²⁴

The catchment area of the Tendaguru workers expanded constantly in the course of the excavation. In the beginnings of the expedition, besides those workers initially provided by Sattler, the people living in the surrounding areas of the Tendaguru would be the first to become fossil excavators. As far as the sources

124 Cf. UAT. 407/2,1, pp. 99–104, 108–109, 120–121, 126, 132, 140–141, 193, 238. Cf. Maier. *African Dinosaurs*, pp. 11, 19–20, 24, 27, 28, 36. Cf. UAT. 407/80, pp. 6, 8, 9, 10, 11, 38–39, 87.

can tell, these people living close to the Tendaguru did not avoid the palaeontological work but joined the excavations quickly. With them taking up work at the Tendaguru steadily, the excavating equipment available soon failed to keep up with the ever-rising number of workers. In May 1909, Hennig noted: “as soon as we have more tools, we will be happy to hire more.” Strikingly, Hennig noted further: “There is certainly no lack of supply, almost daily we have to turn away more job seekers.”¹²⁵ In the following month, the job hunters arrived at the Tendaguru from even more faraway places, and Hennig and Janensch initially had to refrain from employing these migratory workers too. In June 1909, Hennig noted:

[five] Wayaos want[ed] work on the grounds that they have marched a full month for this purpose. When I asked them who had sent them, I was told that they had ‘only heard about it’. Unfortunately, we had already hired 17 men and rejected 15 more. Our work seems to be very popular indeed.¹²⁶

Given the ostensible popularity of Tendaguru’s palaeontological work, resuming the excavations in the second season in April 1910 went smoothly. Hennig could not only count on the returning workers, he also had to send some of the newly arriving migratory workers away yet again, because he expected further “Wayao and Wangoni” to arrive soon. This time, workers even came as far as from 700 km distant Lake Nyassa to find employment at the Tendaguru between April and July 1910.¹²⁷ Whereas many European settlers, particularly in the north of German East Africa, generally suffered from insufficient labour supplies at this time, and were happy if only one-third of the demanded workforce would appear at their workplace in the morning, absenteeism at the excavation ditches at the Tendaguru almost did not occur at all. According to Hennig, the “discipline at Tendaguru would be the envy of the northern planters.”¹²⁸ Having investigated the Tendaguru Expedition, the historian Gerhard Maier is of the very same opinion. Maier even claims that cutting wages or dismissing workers because of poor work performance or unauthorised absenteeism was “the most serious punishment” for the workers at the Tendaguru.

125 UAT. 407/2,1, p. 109, cf. pp. 99–104, 108–109, 120–121, 126, 132, 140–141, 193, 238. Cf. Maier. *African Dinosaurs*, pp. 11, 19–20, 24, 27, 28, 36. Cf. UAT. 407/80, pp. 6, 8, 9, 10, 11, 38–39, 87.

126 UAT. 407/80, pp. 33–34, cf. pp. 6, 8, 9, 10, 11, 38–39, 87. UAT. 407/2,1, p. 109, cf. pp. 99–104, 108–109, 120–121, 126, 132, 140–141, 193, 238. Cf. Maier. *African Dinosaurs*, pp. 11, 19–20, 24, 27, 28, 36.

127 UAT. 407/81, p. 5, cf. pp. 2, 5, 9, 30. Cf. UAT. 407/2,2, pp. 312, 325, 332–337, 348, 359. Cf. Maier. *African Dinosaurs*, pp. 54, 56.

128 UAT. 407/2,2, p. 367. Cf. Hennig. *Am Tendaguru*, p. 41.

Moreover, Maier even goes on to say that the “interaction between Europeans and Africans appears to have generally been positive.”¹²⁹

This is almost a singular finding compared to the vast majority of reliable studies investigating colonial labour regimes not only in German East Africa, but also in other colonies. Generally, colonial labour regimes were often characterised by force and abuse of workers. Thus, the ‘positive interaction’ between the European coloniser and the East African colonised at the Tendaguru turns the so-called ‘labour question’ in German East Africa upside down. Instead of the perpetuated discourses about the alleged African ‘work-shyness’, general labour scarcity and forced labour policies in German East Africa,¹³⁰ Hennig was convinced that the workers were not primarily concerned about the wages paid at the Tendaguru and did not need to be coerced through the imposition of colonial taxes. Instead, their motivations were simple – a desire for consumer goods such as clothing, for example – and they arrived out of their own initiative. It can thus be seen why Hennig also rejected the image of the ‘lazy African’ repeatedly in his self-narratives. He really believed that the African workers “were easy to treat and willing – just as willing as any European is at work.”¹³¹ As if this was not enough, the German palaeontologist went even further:

As a former student, I know how to appreciate the precious freedom of choice about whether to work or not. And apart from the students, only one person has this freedom at his disposal: someone who sits on his own land. This little subjugated people [in German East Africa] is 1,000 times freer than our proletariat of world power. If only we would not rob them of their marvellous property with our rule! All the serenity of his being is rooted in this independence! Someone in our region really no longer needs to ‘educate the Negro’; their already awakened need for clothes, perhaps even the old one for conviviality, leads them to the European.¹³²

Moreover, Hennig also stated repeatedly his impression that the workers also came to the palaeontological excavations site because of their genuine interest in the work at the Tendaguru. The palaeontologist appreciated the workers’ interest in his subject and its significance as an almost singular event. Compared to European societies where Hennig had “always sensed a certain resistance” and “a certain sluggishness in getting into” the scientific details of palaeontology and geology, he sensed that a palaeontologist could “only wish to always deal with such an audience” with profound interest in scientific questions as he had met in German East

¹²⁹ Maier. *African Dinosaurs*, pp. 34, 49.

¹³⁰ Cf. Conrad. *Globalisation*, pp. 77–143. Cf. Sippel. “Wie erzieht man”, pp. 311–333. Cf. Koponen. *Development*, pp. 321–440.

¹³¹ UAT. 407/2,1, p. 121, cf. pp. 109–111, 120–121, 250.

¹³² UAT. 407/2,2, p. 419, cf. 361. Cf. UAT. 407/2,1, p. 164.

Africa and not only with mere demand for entertainment as he was used to in Germany.¹³³ Certainly, without the skill, interest and understanding of the Tendaguru's workers, overseers and preparators, the entire endeavour would not have been successful at all. Yet, Hennig's picture of colonial labour is certainly far too rosy and bears a good deal of his romanticising about life in the German colony. This is especially evident when he compares colonial labour relationships to the life of a European student. In the end, the truth is found somewhere in between the perpetuated discourses and Hennig's views. To generate a more nuanced picture of labour at the Tendaguru, a closer look into the sources is thus required.

The actual tasks of labour at the Tendaguru excavations were manifold and shuffled amongst the workforce, depending on the urgency of the task. Whereas, water carriers were predominantly female, the sources suggest that there were also occasionally men who were assigned to the task. Undoubtedly, the most important task for male workers at the Tendaguru was digging the soil with spades, shovels, pickaxes and hoes to expose the petrified dinosaur fossils slumbering in the ground. This comparatively simple but physically demanding work then gave way to more complex tasks. Depending on the size of the dinosaur skeleton under excavation and its depth in the soil, the initial ditches and trenches could develop into proverbial excavation pits. These pits could be as deep as ten meters and therefore required reinforcements made from wood to prevent the walls from collapsing. At quarry 'S', a fully encompassing retaining wall had to be built from wood, as Hennig and Janensch feared the walls' slippage. Both the construction materials, primarily, bamboo and rope, and the design of the reinforcing walls were based on East African techniques of house construction. Hence, Hennig and Janensch relied on the collective expertise of their workers once again. After the actual excavations, the two German palaeontologists had to train their workforce in several skills before the East African staff could work independently. As soon as the fossils were exposed, plaster casts were made before the petrified bones were ready to be ultimately removed from their find location. As a considerable number of bones were porous and their future transport required a certain amount of stability, measures of conservation had to be applied to any find. Rubber lotions were applied to bridge cracks and to make the fossils resistant to shocks. As there was no plaster available in German East Africa and imports from Europe soon proved either very costly or defective, Hennig and Janensch used East Africa's rich resource of red clay as a substitute for plaster casts. Apart from this fusion of European and African fossil conservation techniques, transporting the dinosaur bones required additional ingenuity. Already in the beginnings of

133 UAT. 407/2,2, p. 361, UAT. 407/2,1, p. 165.

the expedition, Berlin's Museum of Natural History had contacted the railway constructing company *Philipp Holzmann* to enquire whether it was worth considering using modern lorries to transport tons of bones from the Tendaguru to Lindi's port on the coast. Ultimately, the answer was negative: *Holzmann's* trial using lorries to transport the materials needed for railway construction had failed, as the early motor vehicles had survived neither the East African climate nor its road conditions. As the sleeping sickness regularly killed any beast of burden in the colony, transport by mules, donkeys, oxen or horses was impossible as well. Hence, human portage remained the only possible means of transportation.¹³⁴

This form of transportation impacted the realities of transport profoundly. As one human porter was only able to carry ca. thirty kg over a long period, big bones either had to be cut into pieces or attached to wooden bars so that a party of up to twenty-five men could carry the load together by grasping the bars or lifting them onto their shoulders. If this was not enough to protect the sensitive fossils from damage, each piece was wrapped in a bamboo cask that was padded inside with dry grass. Caravans of several dozen porters would then transport their loads to the district capital of Lindi within two to three days and unload their cargo there. In Lindi, the casks were packed into crates made from imported Scandinavian lumber and manufactured by East African pupils at the governmental crafts school run by the German colonial administration in Lindi. Except for constructing and packing the shipping crates, each work step had to be carried out at the Tendaguru and performed by the East African workforce employed there. Except for portage, which was physically hard enough, all other tasks required a high amount of local knowledge, diligence and craftsmanship. Initially instructed by Hennig and Janensch, it was the East African preparators and overseers led by Boheti who taught the rest of the workforce how to accomplish these tasks. Furthermore, the overseers and preparators would also delegate these complex tasks to the workers of the Tendaguru Expedition as part of the daily work routine.¹³⁵

5.6.3 Work Routine at the Tendaguru

The general work rhythm was divided into a rainy and a dry season. During the dry season, the most active work period, work started at sunrise between five

¹³⁴ Cf. Hennig. *Am Tendaguru*, pp. 23–29, 31, 34–40, 44–46, 49, 52, 54–56, 92–93. Cf. Maier. *African Dinosaurs*, pp. 27, 30–32, 42–44, 77, 83, 89–98. Cf. Vennen. 'Arbeitsbilder', pp. 56–75. Cf. MfN. HBSB. 1.3, "Schreiben von Gwinner, Berlin, den 15. Februar 1909."

¹³⁵ Cf. Hennig. *Am Tendaguru*, pp. 23–29, 31, 34–40, 44–46, 49, 52, 54–56, 92–93. Cf. Maier. *African Dinosaurs*, pp. 27, 30–32, 42–44, 77, 83, 89–98. Cf. Vennen. 'Arbeitsbilder', pp. 56–75.

and six o' clock in the morning. It then lasted until two o'clock in the afternoon without break. The workers assembled for the morning roll call in the camp, where they were allotted into groups of ten to twenty-five men for each overseer responsible for one excavation ditch. After this routine, they would leave the camp for work at the trenches and return to the camp in the afternoon. Generally, there were six days of labour per week, with Sundays being the only day off. Like at Gillman's railway camp, exceptions were sometimes made: for example if time pressured, the palaeontologists called for work on an exceptionally bright Sunday only a few weeks ahead of *masika*. In contrast to railway or plantation labour, at Tendaguru, a workday totalling eight uninterrupted hours was preferred to the alternative of piecework for one major reason: the special nature of palaeontological work. Although "the unusual work with hoe and shovel [. . .] was certainly no less physically demanding than the various types of work on the plantations", excavating at the Tendaguru required "quality work" from all the preparators, overseers and 'simple workers'. The "work of searching required constant attention even to the smallest piece of bone" and thus a certain amount of skill and concentration – which also made it rather inherently satisfying, compared to other colonial occupations. This unusual level of care was just as necessary for the subsequent exposure, removal, shock-resistant packaging and final transportation of the fossils. Moreover, as the excavations soon spread over several square kilometres, the workers would have needed over an hour to reach their allotted ditch and therefore up to two hours would have been wasted if the workers returned to the camp for lunch.¹³⁶ As this quality work in the tropical East African climate required constant concentration, Hennig tolerated some minutes of rest or a short lunch break at the ditch. If the German palaeontologist judged the output insufficient, however, he would demand either some extra hours until four o'clock or until the evening of the same day. Sometimes, Hennig also used the free Sundays to make up for any omissions. Given this overall quite gruelling work routine, I, thus, would not entirely concur with Gerhard Maier's opinion that "work discipline was rarely harsh"¹³⁷ at the Tendaguru, although Hennig's views on colonialism might have been more nuanced than those of most of his contemporaries.

Yet, analysing Hennig's self-narratives, one is initially puzzled not only by his general appreciation of his workers' performance – something that is only rarely expressed in any source produced in a colonial context – but also by Hennig's criticism of European culture and German colonialism. For instance, in a letter to

¹³⁶ Hennig. *Am Tendaguru*, pp. 38–39, cf. p. 40. UAT. 407/2,2, p. 341. Cf. UAT. 407/2,1, pp. 150–152, 184. Cf. UAT. 407/80, p. 117.

¹³⁷ Maier. *African Dinosaurs*, p. 34.

his mother in August 1910, Hennig compared the Tendaguru's formidable labour supply and the workers' performance to those he had heard of in German East Africa's northern districts:

Admittedly, it's easy for us to say: our funds are plentiful and they don't go to our own coffers. We can certainly [. . .] turn a blind eye to all of that. But the planter who struggles for his existence [. . .] must be more buttoned up. And anyone who, like most, sits on corporate plantations, has to earn the sum that is dictated to him, if not from the soil, then from the workers: the shareholders want their dividends. That is the terrible slavery we bring to the country in place of its latent, often hardly recognizable serfdom, which is to be abolished eagerly by all possible "humane" associations and personalities and is carried on by the states as a cultural mission of the first order. The fact that such slavery in our industry is often far more intolerable at home is a dismal consolation.¹³⁸

This lament echoes Hennig's statement on the occasion of the inauguration ceremony of the Wissmann Statue right after his arrival to Dar es Salaam, when he had described German colonialists literally as the 'oppressor'. These views of the palaeontologist are often to be found in his self-narratives, raising questions about Hennig's and Janensch's roles as colonisers, and their views on German colonialism in general. As already demonstrated for the overseers, preparators and personal servants working at the Tendaguru, typical characteristics of German colonial rule in East Africa also applied there, despite the palaeontologists' generally positive appraisals of the work of their East African employees. Regarding the ordinary workforce, Hennig's deeds speak louder than his words as far as the treatment of his workers is concerned.

Undoubtedly, Hennig and Janensch valued not only the work of the preparators, overseers and personal servants, but also that of the workers performing either simpler tasks or having fewer responsibilities. Certainly, the palaeontologists' views on the impact of European colonialism in Africa might have been more nuanced than those of numerous other contemporary colonial diehards. Yet, just as for the East African *boys*, preparators and overseers, the simple workers at the Tendaguru were also subject to the realities of colonial command at the excavation sites. This is certainly reflected in the daily work routine: The workforce's labour rarely actually stopped at the end of eight hours of excavation work. To prepare their dinner after work in the camp, they first needed to collect firewood or water and sometimes needed to repair their huts, if it seemed necessary. This extra workload for so-called 'reproductive labour' after eight hard hours of hard physical work in the excavation ditches was unavoidable, especially for single men who had come to the Tendaguru without their wives or children, or if they could not afford

138 UAT. 407/2,2, pp. 366–367.

the services of a *boy*. Given the case that some men lived relatively close by to the Tendaguru, they would commute from their home village to the Tendaguru every day, walking several hours in the afternoon to finally reach their homes at night. Of course, they then had to get up in the middle of the night to reach the Tendaguru by sunrise again. If they failed to be on time and could not produce a proper excuse, they were fired, had their wages cut or they were “whacked either 15” strokes, had to work on “Sunday”, “or both”.¹³⁹ The same applied to any other forms of absenteeism, and ill men were generally also expected to come to the morning roll call to report sick. Fifteen *kiboko* strokes or face slaps, dismissal, wage cuts or a combination of all these punishments were also applied for offences that appeared to challenge either work discipline or the order of the camp. Besides absenteeism, for Hennig, such offences included gambling, slowdowns at work or portage, theft, sexual affairs with fellow workers that led to scenes of jealousy within the workers’ camp, or ‘disrespectful behaviour’ against the German palaeontologists.¹⁴⁰

Despite the fact that a large number of workers migrated to the Tendaguru seeking work on their own initiative, Hennig and Janensch also relied on the whole arsenal of German colonial command in East Africa, if necessary, for their sufficient labour supply.

5.6.4 Policies of Labour Recruitment at the Tendaguru

Although the labour supply was generally good at the Tendaguru, Hennig and Janensch sometimes relied on their more experienced workers to recruit additional workers for them. As was also done at any other colonial enterprise, the employer – here, the German palaeontologists – would ask one or a few of its longer serving employees to act as quasi-labour recruiters when returning to his or their homes during *masika*, or during other days free of work. Back in the home village, they would ask their fellow villagers to follow them to their employment. Of course, this form of labour recruitment could have many varying facets. Successful recruitment could certainly occur, when the experienced African worker had really been satisfied with his employment and would, therefore, persuade some people to follow him. But in reality, this form of recruitment had also many gateways for abuse. This abuse ranged from making false promises about labour conditions or payment at the employment, up to the open threat or use of physical

¹³⁹ UAT. 407/2,2, p. 368, cf. p. 341.

¹⁴⁰ Cf. UAT. 407/2,1, pp. 150–152, 184. Cf. UAT. 407/80, pp. 24, 51, 72. Cf. UAT. 407/81, pp. 28, 71. Cf. Hennig. *Am Tendaguru*, pp. 38–40.

violence to force others to leave home for a distant place of work. Many of these aspects also occurred in the process of labour recruitment for the Tendaguru. Even though the labour supply was generally not a big challenge for Hennig and Janensch, it was sometimes not enough to simply wait for new workers to pour into the camp at the Tendaguru. Once, Hennig ordered two of his experienced overseers to recruit new men from as far away as neighbouring Mozambique. Returning only with thirteen men from the neighbouring colony, the two experienced Tendaguru men were not very successful on this occasion. But as new workers had arrived at the excavations, on their own, in the meantime, no labour scarcity ultimately occurred in this instance.¹⁴¹

Yet, if time was a pressure and people were needed urgently, like in November 1909, Hennig was ready to change his tunes and use the means, typical for many colonial employers. When a local *Jumbe* rejected Hennig's call for the provision of porters, the "vigorous and industrious overseer Mohammadi commandeered" a sufficient number of men: "By being on his feet from Sunday afternoon 4 o'clock until Monday morning at 9 o'clock; he walked through the villages, knocked on every house, woke the sleeping people with the friendly invitation: 'haia Safari!' and sent them to the camp at night."¹⁴² It is not entirely clear what Hennig means by 'Mohammadi's friendly invitation', but reading between the lines and behind Hennig's euphemistic expression 'friendly invitation', it seems that the overseers of the Tendaguru were entitled to exert force, if necessary. On a similar occasion in March 1910, when the palaeontologist was working close to the *Central Railway*, Hennig is more explicit when stating that his *boy* "Ali and one man [went] out to commandeer porters, i.e., seize them while working in the[ir] field, do not even give them time to say goodbye to the woman, [and] do not even find the slightest resistance."¹⁴³ But since this sort of thing was an ordinary occurrence in German East Africa, Hennig did not feel disturbed by this forceful recruitment. To him, it was just normal, as shown when he observed the following scenes of labour recruitment:

An Askari has an order from the district office to gather 60 men for certain Jumbes, and can only fulfil this order by roaming the villages at night, and since all the people flee into the Pori [bush], warned by the children's guards, dragging the women with them; the next morning the Jumbe is allowed to pick up his better half [here: his wife] at the [governmental] station – against the obligation to register [for work]!¹⁴⁴

¹⁴¹ Cf. UAT. 407/2,2, pp. 312–313, 348. Cf. MfN. HBSB. 5.1, p. 177.

¹⁴² UAT. 407/80, p. 91.

¹⁴³ UAT. 407/80, p. 148.

¹⁴⁴ UAT. 407/80, p. 148.

As long as this was the reality in German East Africa, Hennig was satisfied that “[t]he social tone [was] a bit rough” and this meant that he and his men would not “attract attention when [they] ‘search[ed]’ for carriers by force”¹⁴⁵ themselves. Apart from using physical means of labour recruitment on their part, Hennig and Janensch could also always count on the German colonial administration if anything threatened the excavation process at the Tendaguru hill. In this respect, especially the district office in *Lindi*, with its District Officer Wendt, played a crucial role. Whenever the palaeontologists needed any assistance, the district office exerted their power to provide the necessary logistics through forced labour, including finding porters to carry dinosaur fossils from the Tendaguru to the coast. In September 1910, Hennig even requested District Officer Wendt to build a new road from the Tendaguru to the coast, as many heavy loads of dinosaur fossils were too big to be carried on the existing narrow foot paths. In response to this request, the district office of *Lindi* did not hesitate one second. To acquire the labour needed to build this new road, the representatives of the colonial administration went to several villages in the region, whose populations were then forced to construct the new infrastructure, sustaining the future transportation of huge loads of dinosaur fossils.¹⁴⁶

Particularly, this incident regarding road construction reveals how deeply Hennig and Janensch were embedded in colonial hierarchies and mechanisms of colonial command. However, the incident also points to the comparative benevolence of the Tendaguru Expedition as a colonial employer. In a letter to his mother, Hennig wrote about his experiences at the road constructions:

I slept one night down at the Noto [. . .] to visit the works and to dismiss the Liwali, the highest black official, who was in charge of the works. It was a little difficult for me to preserve the dignity of the Reich when he told me that the people were running away from him despite his beatings and imprisonment, because they had to do the work for free and I must confess that I would have been angry as well. To compensate them [the workers] I shot a berappi [. . .].¹⁴⁷

Compensating the unpaid quasi-tributary labour for road construction with the provision of berappi meat, Hennig attempted to make amends for the local population’s forced labour with the Tendaguru Expedition on his own accord. At the same time however, this ‘compensation’ appears to have been primarily symbolic as Hennig himself and his palaeontological team were the real reason why District Officer Wendt recalled the populations of the *Lindi* district for unpaid forced

¹⁴⁵ UAT. 407/80, p. 148. Cf. UAT. 407/81, p. 106.

¹⁴⁶ Cf. UAT. 407/80, p. 81. Cf. UAT. 407/81, p. 37. Cf. UAT. 407/82, pp. 3, 26. Cf. UAT. 407/2,1, pp. 193–194. Cf. UAT. 407/2,2, pp. 356–366, 374–375, 413–414, 494, 496.

¹⁴⁷ UAT. 407/2,2, p. 375.

road construction work, which was accompanied by physical violence exerted by the *Liwali*. Moreover, this incident shows how much power a German palaeontologist working in German East Africa could attain: Without having any official office at the colonial administration at all, Hennig felt, and was indeed, entitled to dismiss the local *Liwali*, who was only a subordinate to the German District Officer Wendt, but still superior to the *Akida*, *Jumbe* and the local African population, of course.

Yet, it seems that particularly the *Lindi* district was special in this regard. Hennig himself was aware of this fact and attributed it to the governmental policies of *Lindi*'s District Officer Wendt. When excavating in the neighbouring *Kilwa* district around the town of Makangaga, Hennig faced comparably stauncher resistance against the Tendaguru Expedition's demand for portage from not only the local populations, but also from the East African *Jumbes*, *Akidas* and *Liwalis*, who repeatedly would not accept Hennig's orders. When Hennig left East Africa for good in summer 1911, he was convinced that the situation in the *Kilwa* district was, compared to the *Lindi* district, "really like day and night. The Tendaguru was unusually well situated for [the] expedition!"¹⁴⁸ This held true not only for the overall setting but, particularly, regarding the labour supply and the competences of the East African workers at the Tendaguru Expedition. Both seem to have been exceptional for any contested place of labour in German East Africa, as in *Lindi* – or rather at the area surrounding the Tendaguru – an exceptional situation regarding labour supply prevailed between 1909 and 1911.

148 UAT. 407/2,2, p. 494, cf. pp. 413–414, 494, 496.